Sponsored Research Administration

A Guide to Effective Strategies and Recommended Practices

Marc Schiffman
Editor

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Foreword

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Sponsored research administration as a profession is only slightly more than a half-century old. It arose largely as a result of significant government investment in basic research in the sciences and engineering at colleges and universities, which began during World War II and expanded in the post-war years. In the early years of research administration at universities, it was hardly a full-time job, let alone a profession. The duties were relatively simple and straightforward: Help those relatively few faculty members interested in obtaining research grants get their proposals submitted on time; then when the award comes in, make sure that it gets to the right people on the campus—including the accountants who have to submit the bills and keep track of the payments.

The emergence of research administration as a profession has occurred within my lifetime. The National Council of University Research Administrators (NCURA) was formed in 1959, the year in which I graduated from high school. It was not until 1965 that the University of California, Los Angeles (UCLA) established its Office of Extramural Support, where I was to begin my career in research administration in 1975. Prior to 1965, the responsibilities for research administration at UCLA were handled by an administrator in the business office who also had many other duties and responsibilities.

Turning to the first decade of the 21st century, we find that virtually every college and university has a sponsored research, or sponsored programs, office and that NCURA has grown to an organization with more than 5,000 members. The fundamental responsibilities of the research administration office, however, have not changed—assist faculty members to get their proposals submitted on time and the awards received and processed. There is very little else about research administration, however, that hasn’t changed since the humble origins of the profession.

The world of research administration has become complex and specialized, and thus the motivation for this publication, Sponsored Research Administration: A Guide to Effective Strategies and Recommended Practices. Today it is extremely difficult, if not impossible, for one individual to know all there is to know about research administration. Whether one works in a central administrative office or at the school, college, or departmental level, the world of research administration encompasses a variety of topics about which the research administrator needs to be knowledgeable.

With the assistance of a highly creative Editorial Advisory Panel, we have identified an initial set of topics that are critical to the field of research administration. On an ongoing basis, we will continue to identify important topics and add to the initial set. In every case, we seek out the leading practitioners in each of these fields and invite them to write a chapter on the topic that is their particular specialty. What a wonderful opportunity this provides. Think of it as a series of mini-appren-
ticeships with the very best and brightest research administrators in the country. A journey of a thousand miles begins with but a single step. Our journey through the world of sponsored research administration begins with coverage of some fundamental and critically important aspects of this profession. Future updates to the Guide will contain revisions, additions, and enhancements to existing chapters and include additional chapters, where appropriate.
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How to Use the Guide

Tabs and Chapters

*Sponsored Research Administration: A Guide to Effective Strategies and Recommended Practices* (the *Guide*) uses tabs (dividers) to designate chapters. Tabs for chapters contain the beginning paragraph numbers for information contained therein (e.g., ¶1200). References to entire chapters cite initial paragraph numbers (e.g., Chapter 300). As more chapters are added to the book, correspondingly new tabs with new paragraph numbers will be added.

Within each chapter, readers will find different types of material — narrative content, supplementary materials, practical tools, case studies, policies, resources, etc. — that will be added to the *Guide* and updated over time. As more content is added to each chapter, correspondingly new paragraph numbers within each chapter will be added (e.g., ¶720).

Contents Listing

The *Guide* is a two-volume information service. A Master Table of Contents for both Volumes 1 and 2 of the *Guide* appears as the first tab and precedes this section on “How to Use the Guide.” The first page in Volume 2 is a contents page for the material in that volume. In both volumes, the page that immediately follows each tab (divider) is a detailed contents listing for the information contained therein.

Page/Date Listing

A Page/Date Listing is located behind the Master Table of Contents. It lists the most current date for all pages in the *Guide*, allowing users to verify that they have the most recent version of any individual page and that their copy of the *Guide* is updated completely. The Page/Date Listing is revised with each update to the *Guide*.

Paragraph Numbers

All references in the *Guide* are to chapters or paragraph numbers, which appear within the text of chapter material. Skips in paragraph numbers — between chapters or within chapters — allow for orderly growth of the *Guide* in the future.

Page Numbers

Page numbers, which appear in the upper right corners of all pages in the *Guide*, are used solely for the insertion of new (and deletion of old) pages when quarterly updates are received. The “Add/Delete” instructions that accompany updates refer to page numbers. All substantive references in the *Guide* are to paragraph numbers, not page numbers. Page numbers have a prefix that corresponds to the beginning paragraph number of the chapter. (For example, Page 105:2 is the second page of Chapter 100, ¶105.) Within chapters, skips in page numbers allow for the expansion of existing paragraphs, or the addition of new paragraphs in the future.
Index
The last tab in the Guide includes a comprehensive multiple-entry Index to all information in the chapters. The Index is updated once a year, in October.

Quarterly Updates
Four times each year, new pages for insertion in the Guide arrive with easy-to-follow “Add/Delete” instructions. Quarterly updates — dated January, April, July, and October — permit the addition of new materials and new chapters to the Guide, as well as revisions to existing chapters, the Page/Date Listing, and the Index.

CD ROM
Annually, in October, a searchable CD version of the Guide is sent to current subscribers as part of the update.

Users’ Aids
Acronyms. As is true for many professions, the use of acronyms is ubiquitous in sponsored research administration. In the Guide, acronyms are defined as they appear in the text, but as an additional user aid, a comprehensive list can be found beginning on page 31 of this “How to Use” section.

Knowledge Check
A set of Q&As will be added to each core chapter that is intended to be used in the training of new staff and others who may be less familiar with sponsored research administration (see, for example, ¶1390). The Q&As are designed to measure how accurately the material contained in each chapter has been understood. An answer key is separately included for testing purposes for each set of questions. Topics for discussion will be added also. These materials will be updated regularly.

Editorial Questions
Marc Schiffman
schiffman@ncura.edu
National Council of University Research Administrators
1015 18th Street, NW, Suite 901, Washington, DC 20036
(202) 466-3894

Customer Service Questions
Phone 1-202-466-3894 or via email info@ncura.edu.
Acronyms and Terms Commonly Used in Sponsored Research Administration and the Guide*

OMB Circulars and Guidance

A-21  OMB Circular A-21, Cost Principles for Educational Institutions
A-87  OMB Circular A-87, Cost Principles for State, Local and Indian Tribal Governments
A-102 OMB Circular A-102, Grants and Cooperative Agreements with State and Local Governments
A-110 OMB Circular A-110, Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals or Other Non-Profit Organizations
A-122 OMB Circular A-122, Cost Principles for Non-Profit Organizations
A-133 OMB Circular A-133, Audits of States, Local Governments & Non-Profit Organizations

Uniform Guidance

*This listing is based on one prepared by the Federal Demonstration Partnership (www.thefdp.org). As such, no copyright is claimed in this listing.
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<th>Full Form</th>
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</tr>
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<td>ACA</td>
<td>America COMPETES Act</td>
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<td>ACO</td>
<td>Administrative Contracting Officer</td>
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<tr>
<td>ADA</td>
<td>Americans with Disabilities Act of 1990</td>
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<td>AE</td>
<td>Adverse Event</td>
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<td>AECA</td>
<td>Arms Export Control Act</td>
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<td>AES</td>
<td>Automated Export System</td>
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<td>AFAA</td>
<td>Air Force Audit Agency</td>
</tr>
<tr>
<td>AFARS</td>
<td>Army Federal Acquisition Regulation Supplement</td>
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<td>AFOSR</td>
<td>Air Force Office of Scientific Research</td>
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<td>AFRL</td>
<td>Air Force Research Lab</td>
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<td>America Invents Acts</td>
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<td>Agency for International Development (USAID)</td>
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<td>Academic Medical Center</td>
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<td>Abbreviated New Drug Application</td>
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<td>ANPRM</td>
<td>Advance Notice of Proposed Rulemaking</td>
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<td>Association of Public and Land-grant Universities</td>
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<td>Advanced Research and Development Activity</td>
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<td>American Recovery and Reinvestment Act</td>
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<td>Automated Standard Application for Payments</td>
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<td>ASP</td>
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<td>Business-to-Business</td>
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<td>Confidentiality Agreement (sometimes, Confidential Disclosure Agreement)</td>
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<td>DFARS</td>
<td>Defense Federal Acquisition Regulation Supplement</td>
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<td>Department of Health, Education, and Welfare (now DHHS or HHS)</td>
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<td>DIALOG</td>
<td>A computer-based search system using key words</td>
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<td>DIS</td>
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<td>Other Transaction Agreement; also Office of Technology Assessment</td>
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<td>Procuring Contracting Officer</td>
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<td>People for the Ethnical Treatment of Animals</td>
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<td>Protected Health Information</td>
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<td>PI</td>
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<td>SACHRP</td>
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<td>SPIN</td>
<td>An online search system for research opportunities developed by the State University of New York (SUNY) System</td>
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<td>Science and Technology Policy</td>
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<td>STTR</td>
<td>Small Business Technology Transfer</td>
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<tr>
<td>T&amp;A</td>
<td>Time and Attendance</td>
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<td>TAA</td>
<td>Technology Assistance Agreement (sometimes, Trade Adjustment Assistance)</td>
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<td>Acronym</td>
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<tr>
<td>TBSR</td>
<td>Total Business Systems Review</td>
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<tr>
<td>TCP</td>
<td>Technology Control Plan</td>
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<tr>
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<td>Total Direct Costs</td>
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<td>TTO</td>
<td>Technology Transfer Office</td>
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<tr>
<td>UBI</td>
<td>Unrelated Business Income</td>
</tr>
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<td>Universal Resource Locator</td>
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<td>USA</td>
<td>United States Army</td>
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<td>USAF</td>
<td>United States Air Force</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>USC</td>
<td>United States Code (sometimes USC)</td>
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<tr>
<td>USCCE</td>
<td>United States Sentencing Commission</td>
</tr>
<tr>
<td>USCG</td>
<td>United States Coast Guard</td>
</tr>
<tr>
<td>USDA</td>
<td>United States Department of Agriculture</td>
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<tr>
<td>USDE</td>
<td>United States Department of Energy (also DOE)</td>
</tr>
<tr>
<td>USIA</td>
<td>United States Information Agency</td>
</tr>
<tr>
<td>USML</td>
<td>United States Munitions List</td>
</tr>
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<tr>
<td>VA</td>
<td>Department of Veterans Affairs</td>
</tr>
<tr>
<td>WAWF</td>
<td>Wide Area Workflow (Department of Defense)</td>
</tr>
<tr>
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<td>Western Conference on College Cost Accounting</td>
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<tr>
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</tr>
<tr>
<td>WOC</td>
<td>Without Compensation Appointment</td>
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<td>WPS</td>
<td>Work Plan Statement</td>
</tr>
<tr>
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<tr>
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Overview of Sponsored Research Administration
# Chapter 100
Overview of Sponsored Research Administration

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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

The world of research administration has become ever more complex, specialized, and continues to change at an ever-increasing pace. As such, *Sponsored Research Administration: A Guide to Effective Strategies and Recommended Practices* is published to provide college and university research administrators — and others involved in sponsored programs on campus — with a “living textbook” on the wide range of research administration challenges they face each day.

Chapter 100: Overview of Sponsored Research Administration provides readers a general perspective on the profession and functions of research administration. The chapter also discusses the role of the office of sponsored programs in an institution’s overall research enterprise and includes different types of material addressing topics of general relevance to sponsored research administrators.

The chapter begins with an overview of the profession of research administration written by Julie T. Norris, Director Emeritus of the Office of Sponsored Programs at the Massachusetts Institute of Technology (see ¶105). Norris has long been recognized as one of the leading thinkers and practitioners in the field of research administration. She begins her overview by providing some historical perspective on the growth and development of the field. She goes on to discuss how over the last half century offices of sponsored research have evolved into highly complex business management centers that deal with a variety of issues ranging from electronic proposal submission to research subject protection, conformance with regulatory compliance requirements, and upholding the sanctity of the open-and-free dissemination of research results without a sponsor’s undue restriction or interference.

Norris highlights the characteristics of a successful modern sponsored research administration office. She cites the work of Raymond Woodrow, a pioneer research administrator at Princeton University, and his early admonition that the function of the research administrator is to provide management for research, not management of research. She makes it clear that the sentiment continues to be relevant for today’s professional. Norris concludes her chapter with a discussion of President Bush’s “American Competitiveness Initiative” and its implications for the future of research administration.

As part of a “living textbook,” Chapter 100 — and all other chapters — will continue to respond to the information needs of research administrators through the addition of new material. Future quarterly updates to the *Guide* will contain revisions, additions, and enhancements to ¶105, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶120), practical tools (at ¶130), and statistics and survey results (at ¶160). A “knowledge check” containing Q&As and discussion topics is included at ¶190.
¶105 Overview of Sponsored Research Administration

Julie T. Norris
Director Emeritus, Office of Sponsored Programs
Massachusetts Institute of Technology

Managing a sponsored programs office can be frustrating, nerve wracking, and fraught with perils — but it can also be exhilarating, rewarding, and filled with satisfaction. Sponsored program office management involves working with dedicated and brilliant investigators and scholars who often are on the cutting edges of their fields, carrying out research such as curing diseases, identifying early warning systems for hurricanes and other natural disasters, developing computer hardware and software, and creating products to make lives more comfortable and enjoyable. Sponsored program management also involves working with government and private sponsors that demand timely and adequate stewardship for the funding they provide.

The office of sponsored programs (OSP) sits between the researcher and the sponsor and has responsibilities to both entities. This is not an easy place to be. Each entity — while desiring the same outcome — takes different routes to its achievement. The researcher generally wants to be left alone to do his or her research; the sponsor wants ongoing assurance that progress toward the goal is being made. A key role for a sponsored programs office is to respond to the expectations of both the researcher and the sponsor.

¶105.1 Early Days of Research Administration

It may be helpful to look back at more than 50 years of research administration and see how sponsored programs offices evolved during that time in meeting needs and expectations. In the grand scheme, the creation of offices to handle sponsored programs is a relatively recent phenomenon and — for most institutions — can be closely linked to the rapid influx of funding from the federal government for research at colleges and universities after the Soviet launch of Sputnik.¹

As an example of this growth, federal research funding at colleges and universities grew from approximately $15 million at the outbreak of World War II to $1.3 billion by 1966. (See ¶160.1.) The number of research offices grew also. (See ¶160.2.) In fact, there were almost three times as many such offices established during 1961–1970 (97) than in the period 1945–1960 (34). At the same time, higher education came to recognize the need for “the establishment of wide and stable policies … for the management of research.”²

As federal funding to higher education institutions for basic research was relatively new, the post-war focus at most institutions was on the acquisition of funds, with

¹ Prior to the Cold War and the space race, only a few institutions had established separate sponsored research offices, and these primarily handled industrial contracting activities.

relatively little consideration of ways to manage the funds once they were received. Even the process was far simpler than today — most agencies did not specify formats, page limitations, or type sizes. What has become commonplace in the last twenty years (formats for budgets, representations and certifications, designated proposal structures, etc.) was either nonexistent or minimal at that time. In general, faculty members regarded sponsored programs offices as sources to identify potential sponsors and prepare budgets. Rarely was it acknowledged that the sponsored programs director had a role in the creation and implementation of research policies, and there was no emphasis on any type of compliance other than fiscal compliance.

This laissez-faire attitude disappeared in the 1960s as federal funds for research and training flooded colleges and universities. Sponsored programs offices were expected to collect and disseminate funding information and provide substantive support in the development, preparation, and production of proposals. Fiscal accountability in all its forms was expected from the institution’s general financial system and was rarely handled in a separate office charged with financial research management. The era of increased regulation, however, was on its way as indicated by a Bureau of the Budget Report in 1966, which stated: “This report was undertaken in response to the executive branch’s continuing concern that its research programs be well managed. Specifically, it attempts to identify those administrative procedures which will foster excellent research, assist in strengthening the institutions engaged in federally funded research, and guarantee prudent stewardship of public funds.”

Increased Regulations, Focus on Compliance
The next two decades (the 1970s and 1980s) saw the period of greatest growth in regulations and compliance activity in the research enterprise. The fact that OMB Circular A-21, Cost Principles for Educational Institutions, was initially issued in 1958, reissued in 1979, and revised three times in the 1980s, clearly indicates the federal government’s attention to increased regulation. Also significant was the issuance of the initial version of OMB Circular A-110, Uniform Administrative Requirements for Grants and Other Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations, in 1976, which was designed to provide standardized administration of research programs funded by grants and cooperative agreements, and the 1984 passage of the Single Audit Act (P.L. 98-502) and its implementation in 1985 via OMB Circular A-128, Audits of State and Local Governments. Not only did the government specify requirements for financial audits in A-128, the circular also addressed requirements for compliance with a host of administrative regulations by stating that the auditor shall determine whether “the organization has internal accounting and other control systems [emphasis added] to provide reasonable assurance that it is managing federal financial assistance programs in compliance with applicable laws and regulations.”

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Woodrow’s landmark publication, *Management for Research in U.S. Universities*, illustrates this change.

Woodrow points out that prior to the 1970s the sponsored programs officer’s principal role was that of identifying funding sources and processing proposals. By the mid-1970s, according to Woodrow, that role had expanded to include negotiations with potential sponsors on terms and conditions of awards, officially accepting awards on behalf of the institution, ensuring implementation of all sponsor requirements, and helping with the closeout activities necessary to bring a project to successful completion. The compliance work was primarily in three areas: individual rights and responsibilities; protection of the environment and living organisms; and fraud, waste, and abuse.

The common thread in all these regulations was a requirement for the institution to provide a certification or assurance of compliance with the regulations and to have institutional policies and processes in place to ensure that compliance. It was the breadth, number, and diversity of these regulations and the fact that compliance responsibilities were often distributed among several offices that propelled the development of research administration offices at many institutions. In virtually all major research colleges and universities, the sponsored programs director was officially identified as the individual responsible for coordinating and ensuring that the institution met all these requirements.⁵

‘Unfunded Mandates’

The growth and complexity of federal regulations continued into the 1990s. The key feature of this decade, however, was the number of requirements imposed on institutions whose associated costs were not recoverable through facilities and administrative (F&A) rates because of the federal cap on the administrative portion of the rate. These so-called “unfunded mandates,” grounded in legislative requirements, greatly impacted research administration activities. Conflict of interest, misconduct in science, and cost accounting standards are just three examples of such mandates. As a result of these federal initiatives, the roles of sponsored program officers continued to shift from pure service functions to control and compliance as a primary raison d’etre. For many in the field of research administration, this was a profound, and not always welcome, change.⁶

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105.2 Today’s Challenges

So far during the first decade of this century research administration has been characterized by emphasis in two areas: compliance and electronic research administration. Each of these has significantly impacted the organization of sponsored programs offices and the means by which the offices provide services to their clients. For example, faculty and researchers are accessing research opportunities via the Internet, downloading proposal guidelines, and completing proposals electronically. Research administrators are submitting proposals electronically, requesting approvals from sponsors electronically, and (in the research office or the research finance office) preparing and submitting invoices and financial reports electronically.

These examples simply provide evidence that sponsored programs administrators — in responding to these challenges — will have to adapt. Critical will be the ability to use technology — to understand how to develop and implement systems using technological tools. One example is research administrators’ teaching researchers how to do focused and effective searches themselves. Another is the electronic capability to calculate F&A rates, track Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC) activities, monitor subcontractors, and access a host of other systems that make research administration more effective.

With these challenges facing research administrators, it is important to distinguish, as Raymond Woodrow aptly said in his book, between management of research and management for research. As Woodrow so insightfully pointed out, the difference between management of research and management for research is not only syntactic but also symbolic. Management for research, Woodrow writes, covers “the provision of a nourishing climate, sound policies, supporting services of various kinds, financial systems, and organizational arrangements that will help research to flourish in a university.” Woodrow’s purpose is to provide advice with regard to management that will facilitate, rather than direct, research.

Written almost thirty years ago, the concept of managing for research is as valid today as it was then. But the challenge is greater. It is easy to succumb to the “management-of-research” trap, particularly as the complexity and volume of research administrative requirements has increased and the penalties on the institution for noncompliance range from mild to catastrophic. One purpose of this Guide is to provide strategic insights into how to develop sound principles and effective practices for managing sponsored programs offices in this ever increasingly complex and challenging environment.

Managing the Challenges

Recognizing the difference between “management of” and “management for” research highlights the elements of a successful modern sponsored programs administration office. Characteristics of such an office include the following:

◆ Flexibility — the capacity to change or adjust in response to new conditions, demands, or circumstances

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7 Woodrow, p. xiii.
◆ Nimbleness — mental capacity characterized by speed and adroitness
◆ Responsiveness — readily reacting to suggestions, requests, or appeals
◆ Patience — tolerance over a period of time; restraint, usually in the face of considerable provocation
◆ Knowledge — familiarity, awareness, or understanding gained through experience or study
◆ Attention to detail — the act of dealing with things item by item
◆ Communication skills — the exchange of information, both orally and in writing
◆ Timeliness — the ability to act within a suitable or opportune time
◆ Pro-activity — causing or initiating change

Anyone in a sponsored programs office can readily and personally identify situations where each of these characteristics has been essential. At meetings and workshops sponsored programs officers sometimes exchange anecdotes that required them to call upon these attributes. An example of a scenario where these skills are essential appears below.

**Example**

Western University received a copy of an agreement for carrying out research in environmental protection strategies and for developing a master's degree program in environmental engineering at Foreign University. The agreement was for several million dollars over a five-year period.

The sponsored programs director realized that Western University had never submitted a proposal to any sponsor for this work, and the institution had no agreement with Foreign University for developing this project. In addition, upon reviewing the agreement, it appeared that (i) there was substantial cost sharing required (more than 25 percent), (ii) payment terms were unacceptable, (iii) no funding was provided for monitoring subrecipients, and (iv) the agreement had been signed on behalf of the institution by the principal investigator. This last issue was particularly troublesome to the sponsored program director, since the award was from a federal agency that should have been aware that an institutional — rather than principal investigator — signature was required to bind the institution. To compound the situation, the principal investigator had acted this way before and was fully cognizant of the necessity to have an institutional signature on both the proposal and the award.

A first reaction to this scenario might simply be to reject the award out of hand. Although this might resolve the problem, it certainly would not advance the goals of the institution toward increased international activity, nor would it maintain good relations among the sponsored programs office, the investigator, and the sponsor. The challenge, then, is how to proceed. How would each of the characteristics described above help to develop an approach to the problem? For example, patience with the
errant activities of the principal investigator is critical so as not to cause the situation to
deteriorate more than necessary. Knowledge and communication skills are essential in
dealing with the sponsor. It is important to change the terms of the agreement to be in
line with the policies of the institution, to ascertain that Foreign University is a full
participant in the project, and to examine in detail all elements of the budget to assure
that funds are in the categories necessary for performance. These actions need to be
done in a timely and responsive manner, since the project was supposed to have started a
month before the receipt of the agreement. Negotiation with the sponsor and with
Foreign University must be approached with an understanding that flexibility is essen-
tial, as compromises will inevitably have to be made. Not dealing effectively with the
elements presented by this scenario could (and probably would) result in an impasse.

Policy Development, Implementation
Responding positively to such situations as described in the above example is only one
of the current challenges facing today’s research administration offices and their
leadership. In this new century, policy development and implementation have become
one major focus of directors in sponsored programs offices. There are a number of
issues confronting the office leadership:
(1) How to respond to any proposed policy change
(2) Once adopted, the development of institutional policies and procedures to
implement the change
(3) The cost of such implementation and how the costs might be covered by
institutional funds
(4) The method and extent of such compliance (e.g., whether institutional compliance
policies and procedures should be more inclusive and comprehensive than the
requirement)
(5) How to provide the necessary training on the requirement to the necessary
institutional audience

Other challenges (or opportunities for change) that research administrators should
be prepared to handle include the following:
◆ Compliance
◆ Electronic research administration
◆ Training and education
◆ Organization, structure, and staffing
◆ Dealing with auditors and attorneys
◆ F&A (indirect) costs
◆ Intellectual property
◆ The myriad (often conflicting) rules and regulations
◆ International collaborations and contacts, including export controls and embargoes
Each of these challenges provides opportunities for the OSP and its leadership to support the investigators and the institution by developing strategies to manage the research enterprise successfully. The chapters in this Guide provide descriptions of and approaches to developing strategies for managing sponsored programs offices to meet this objective.

105.3 Sharing Information, Gathering Feedback

It is clear that there is no lack of opportunity for challenging and rewarding work in the area of sponsored programs. What is unique about sponsored programs personnel is the way they cooperate with their peers at other institutions, even though the faculty at the institutions may be competing for the same award. Many people outside the profession, including faculty members, are surprised by the degree of interaction and cooperation that is evident in these relationships. Opportunities to develop strong professional relationships abound and are one of the rewards of working in this exciting field. Providing service to one’s community is a true reward of working in and directing an effective sponsored programs office. A successful research administrator learns from senior colleagues and, therefore, often avoids significant problems. One way of doing so is to become involved in regional and national research administration organizations. Another reward comes, through this membership, in giving back to the profession (for example, by leading workshops on specialized topics).

Within the institution, experience shows that the absence of criticism generally means a job well done. Sometimes, a researcher even provides thanks in person for extra effort by a sponsored programs administrator in meeting a deadline or completing negotiation of a particularly difficult award.

105.4 Looking Ahead

Concern about America’s leadership in science has surfaced in both Republican and Democratic administrations. The response to this concern could significantly impact a sponsored programs office. The future does, indeed, appear to be increasingly demanding.

To address these challenges, this Guide will become a “living textbook” on managing an office of sponsored programs at an institution. It provides research administrators, campus business managers, faculty research leaders, and departmental and school administrators with effective strategies to meet the challenges of the present and the future.
Supplementary Material

This section includes expanded coverage of topics of general relevance to sponsored research administrators. The material included here is culled from a variety of authoritative sources.

Overview of the Congressional Budget Process

The largest sponsor of externally funded programs at colleges and universities, by far, is the federal government (see ¶160.3). As such, provided here is a simplified overview of the congressional budget and appropriations processes, as it may be of interest to research administrators who wish to provide input into the decision making (see Figure 120.1-3, page 120:5, for a listing of congressional contacts).

Data that also may be of interest to research administrators is being complied by the Your Congress-Your Health group, which has invited all members of Congress to complete a questionnaire about where they stand on a range of research and other health-related issues. The group, an initiative of Research!America, the Albert and Mary Lasker Foundation, and other partners including the American Association of Medical Colleges, is making the answers to the questionnaire available in an online, searchable database at www.yourcongressyourhealth.org.

Current Activity. Two good sources for institutions of higher education to keep abreast of research and development funding activity throughout the federal budget process are (1) the American Association for the Advancement of Science (AAAS) (www.aas.org/spp/rd), and (2) the American Association of Universities (www.aau.edu/budget).

Reminder

The congressional appropriations process includes the rules and practices that Congress has developed for the annual consideration of appropriations measures, which provide funding for numerous activities—including, for example, national defense, education, and homeland security. These measures also fund general government operations such as the administration of federal agencies.

Spending Trends

While the size of the annual federal budget has increased in dollar terms (reflecting inflation and an increased population and economy) over the years, the proportion available for common government services has shrunk dramatically. Competition among federal agencies for funding is heating up, and over the last few decades, discretionary spending — covering everything from road building to police protection to national defense to medical research — has been cut significantly. It now makes up only about one third of all federal expenditures — to accommodate rapid growths in other expenses (entitlements such as Social Security and Medicare and the yearly interest the United States must pay to finance the national debt). (See Figure 120.1-1.)

Continuing Resolution. When discussing spending trends and the federal budget, two other concepts are important. When a budget has not been passed prior to the start of the federal fiscal year (October 1), a continuing resolution (CR) must be enacted to allow the government to remain open for business. A CR is a type of appropriations legislation enacted by Congress to provide temporary budget authority for federal agencies to keep them in operation when their regular appropriation bill has not been enacted by the start of the fiscal year. It is a joint resolution, which has the same legal status as a bill.

A CR frequently specifies a maximum rate at which obligations may be incurred, based on the rate of the prior year, the president’s budget request, or an appropriation bill passed by either or both chambers of Congress. There have been times, however, when Congress has used a continuing resolution as an omnibus measure to enact a number of appropriation bills. A continuing resolution is a type of appropriation act and should not be confused
Deficits. The other concept that frequently arises when the federal budget is discussed is that of deficit. The budget deficit is the amount by which the government’s total budget outlays exceed its total receipts for a fiscal year (which gives rise to deficit spending).

Budget Authority

“Budget authority” represents the legal authority for federal agencies to make “obligations” requiring either immediate or future expenditures (or “outlays,” which are payments from the U.S. Treasury). Annually, the president recommends spending levels for the various programs and agencies of the federal government in the form of budget authority, as Congress provides budget authority instead of cash to agencies.

Congress divides budget authority and the resulting outlays into two categories: discretionary spending and mandatory spending (including net interest). Discretionary spending provides funds for a wide variety of activities, while mandatory spending funds entitlement programs and other mandatory spending programs.

Discretionary spending is controlled by the annual appropriations acts, which are under the jurisdiction of the House and Senate Committees on Appropriations. Mandatory spending is controlled by authorization acts under the jurisdiction of the legislative committees (principally the House Committee on Ways and Means and Senate Committee on Finance).

Appropriations measures include all the discretionary spending and some of the mandatory spending. The mandatory spending provided in appropriations measures is predominantly for entitlement programs, referred to as “appropriated entitlements.”

Background: Authorizations and Appropriations

Congress has established an authorization-appropriation process that provides for two separate types of measures — authorization measures and appropriation measures, which serve different functions.

Reminder

The Congressional Budget Office defines entitlement as: “A legal obligation of the federal government to make payments to a person, group of people, business, unit of government, or similar entity that meets the eligibility criteria set in law and for which the budget authority is not provided in advance in an appropriation act. Spending for entitlement programs is controlled through the eligibility criteria and benefit or payment rules.”

Reminder

An appropriation is a type of budget authority that not only provides the authority to make obligations, but also gives the federal agency authority to make the subsequent payments from the Treasury. Appropriations measures provide new budget authority for the program, activity, or agency previously authorized.

An authorization act establishes, continues, or modifies an agency or program. An authorization act also authorizes subsequent appropriations for specific agencies and programs, frequently setting spending ceilings (limits) for them. The authorization of appropriations provisions may be permanent, annual, or multiyear.
### Figure 120.1-2: Congressional Committees

#### Senate Committees (www.senate.gov)

<table>
<thead>
<tr>
<th>Committee</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Armed Services</td>
<td><a href="http://armed-services.senate.gov/">http://armed-services.senate.gov/</a></td>
</tr>
<tr>
<td>Banking, Housing, and Urban Affairs</td>
<td><a href="http://banking.senate.gov/">http://banking.senate.gov/</a></td>
</tr>
<tr>
<td>Budget</td>
<td><a href="http://budget.senate.gov/">http://budget.senate.gov/</a></td>
</tr>
<tr>
<td>Veterans Affairs</td>
<td><a href="http://veterans.senate.gov/">http://veterans.senate.gov/</a></td>
</tr>
</tbody>
</table>

#### House Committees (www.house.gov)

<table>
<thead>
<tr>
<th>Committee</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Relations</td>
<td><a href="http://wwwc.house.gov/international_relations/">http://wwwc.house.gov/international_relations/</a></td>
</tr>
<tr>
<td>Transportation and Infrastructure</td>
<td><a href="http://www.house.gov/transportation/">http://www.house.gov/transportation/</a></td>
</tr>
</tbody>
</table>
The jurisdictions of six Senate appropriations subcommittees are not parallel to the jurisdictions of their House counterparts, while the jurisdictions of the remaining six Senate subcommittees are parallel, as follows:

<table>
<thead>
<tr>
<th>Senate Subcommittee</th>
<th>House Subcommittee (or Full Committee)</th>
<th>Jurisdiction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>Agriculture</td>
<td>Parallel</td>
</tr>
<tr>
<td>Commerce, Justice, and Science</td>
<td>Science, State, Justice, and Commerce</td>
<td>Not Parallel</td>
</tr>
<tr>
<td>Defense</td>
<td>Defense</td>
<td>Not Parallel</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>No Subcommittee (see below)</td>
<td>Not Parallel</td>
</tr>
<tr>
<td>Homeland Security</td>
<td>Homeland Security</td>
<td>Parallel</td>
</tr>
<tr>
<td>Interior</td>
<td>Interior and Environment</td>
<td>Parallel</td>
</tr>
<tr>
<td>Labor, Health and Human Services, and Education</td>
<td>Labor, Health and Human Services, and Education</td>
<td>Parallel</td>
</tr>
<tr>
<td>Legislative Branch</td>
<td>No Subcommittee (Full Committee Jurisdiction)</td>
<td>Parallel*</td>
</tr>
<tr>
<td>Military Construction and Veterans Affairs</td>
<td>Military Quality of Life and Veterans Affairs</td>
<td>Not Parallel</td>
</tr>
<tr>
<td>State and Foreign Operations</td>
<td>Foreign Operations</td>
<td>Not Parallel</td>
</tr>
<tr>
<td>Transportation, Treasury, the Judiciary, Housing &amp; Urban Development</td>
<td>Transportation, Treasury, Housing &amp; Urban Development, the Judiciary, District of Columbia</td>
<td>Not Parallel</td>
</tr>
</tbody>
</table>
* There are two minor exceptions: Due to congressional comity, the House committee does not recommend funding levels for Senate activities and the Senate subcommittee does not recommend funding levels for House activities.


Authorization laws have two basic purposes. They establish, continue, or modify federal programs, and they are a prerequisite under House and Senate rules (and sometimes under statute) for Congress to appropriate budget authority for programs.

Some authorization laws provide spending directly. In fact, well over half of federal spending now goes to programs for which the authorizing legislation itself creates budget authority. Such spending is referred to as direct, or mandatory, spending. It includes funding for most major entitlement programs. (Some entitlements are funded in annual appropriation acts, but the amounts provided are controlled by the authorization law that established the entitlement.)

The authorization laws that provide direct spending are typically permanent, but some major direct spending programs, such as the Food Stamp program, require periodic renewal.

**Appropriations Acts and Discretionary Spending.** Discretionary spending is provided in approximately a dozen appropriation acts. For discretionary spending, the role of the authorizing committees is to enact legislation that serves as the basis for operating a program and that provides guidance to
the Appropriations Committees as to an appropriate level of funding for the program. That guidance typically is expressed in terms of an authorization of appropriations. Such authorizations are provided either as specific dollar amounts (definite authorizations) or “such sums as are necessary” (indefinite authorizations).

In addition, authorizations may be permanent and remain in effect until changed by Congress, or they may cover only specific fiscal years. Authorizations that are limited in duration may be annual (pertaining to one fiscal year) or multiyear (pertaining to two, five, or any number of specific fiscal years). When such an authorization expires, Congress may choose to extend the life of a program by passing legislation commonly referred to as a reauthorization. Unless the underlying law expressly prohibits it, Congress may also extend a program simply by providing new appropriations. Appropriations made available for a program after its authorization has expired are called “unauthorized appropriations.”

The U.S. House of Representatives by precedent generally originates appropriation bills.

Basic Stages of the Congressional Budget Process

The framework of the budget process can be divided up into five stages, each of which is governed by its own procedures outlined in the Budget Act, the rules of the House and Senate, and other relevant statutes. The last three stages often occur simultaneously. The five budget stages are as follows.

◆ President’s Budget Submission. The president submits a comprehensive budget request to Congress in early February that outlines the administration’s policy and funding priorities and the economic outlook for the coming fiscal year. This budget, which estimates spending, revenue, and borrowing levels, is compiled by the Office of Management and Budget (OMB) from input by the various federal agencies, with funding broken down into 20 budget function categories.

◆ Adoption of the Budget Resolution. House and Senate committees hold hearings on the president’s budget and the Budget committees report a “concurrent resolution” on the budget that sets each committee’s allocation of spending authority for the next fiscal year and aggregate spending and revenue levels for five years. The budget resolution also establishes aggregate totals with respect to revenues and spending for the entire federal budget. This resolution, once adopted, is not law, as it is not signed by the president. The allocations, enforceable through points of order, establish the framework to consider spending and revenue bills on the House and Senate floor.

◆ Passage of Appropriation Bills. In May the House begins consideration of the 13 annual appropriation bills for the next fiscal year based on the discretionary spending allocation in the budget resolution. As these bills move through hearings, markups, Floor consideration, and conference, they
TRADITIONAL CALENDAR OF CONGRESSIONAL BUDGET ACTIVITIES

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadline for submission of President’s budget.</td>
<td>First Monday in February*</td>
</tr>
<tr>
<td>Deadline for submission of Congressional Budget Office report on projected spending for the forthcoming fiscal year.</td>
<td>February 15*</td>
</tr>
<tr>
<td>Deadlines for committees to submit their “views and estimates” to the Budget Committees.</td>
<td>Six weeks after the President’s budget submission*</td>
</tr>
<tr>
<td>House and Senate Budget Committees develop respective budget resolutions. House committee reports in March; full House votes on resolution roughly 1 week thereafter.</td>
<td>March</td>
</tr>
<tr>
<td>Deadline for Senate Budget Committee to report its budget resolution. Full Senate acts on budget resolution roughly 1 week thereafter.</td>
<td>April 1*</td>
</tr>
<tr>
<td>House-Senate conferees develop conference report on budget resolution, and each chamber votes on the resolution conference report.</td>
<td>April 1-15</td>
</tr>
<tr>
<td>Congress completes action on concurrent resolution on the budget.</td>
<td>April 15*</td>
</tr>
<tr>
<td>Authorizing committees develop reconciliation legislation (if necessary) and report legislation to Budget Committees. Budget Committees package reconciliation language and report to floors of their respective chambers. After passage in each chamber, House-Senate conferees develop conference report on reconciliation and bring to floors of House and Senate.</td>
<td>April 15-May</td>
</tr>
<tr>
<td>The House may begin to consider annual appropriations bills.</td>
<td>May 15*</td>
</tr>
<tr>
<td>House Appropriations Committee reports the last of its annual appropriations bills.</td>
<td>June 10*</td>
</tr>
<tr>
<td>Congress completes action on reconciliation legislation (if necessary).</td>
<td>June 15*</td>
</tr>
<tr>
<td>House completes action on House appropriations bills.</td>
<td>June 30*</td>
</tr>
<tr>
<td>Senate completes action on Senate appropriations bills. House-Senate conferees complete action on appropriations conference reports and bring to floors of House and Senate.</td>
<td>July 1-September 30</td>
</tr>
<tr>
<td>Fiscal year begins.</td>
<td>October 1</td>
</tr>
</tbody>
</table>

are constrained by the levels and allocations in the budget resolution and the enforcement of the Budget Act and through House and Senate rules.

◆ **Consideration of Reconciliation Legislation.** If the spending and revenue levels in the budget resolution require changes in existing law, the resolution would contain instructions to committees to report legislation containing such statutory changes.

◆ **Consideration of Authorization Legislation.** Congress considers numerous measures authorizing the appropriation of funds on a myriad of programs each fiscal year. This decision making is constrained by the Budget Act and through House and Senate rules.

An annual time line for the budget process is provided at Figure 120.1-3.
Budget Mysteries Revealed (and why you should care)*
Kelsey Cook, National Science Foundation

Where does the money come from? How is it allocated?

Establishing a budget for the NSF Chemistry Division programs is a complex and convoluted process. It begins each January, roughly 21 months before the start of the relevant fiscal year (FY). Phase 1 entails Divisional development and assessment of ideas for consideration within the Mathematics and Physical Sciences Directorate (MPS). Inputs include various community priorities, as outlined in workshop reports, program reviews, and other sources. This process continues through the spring … . [See Budget Time Line in Figure 120.1-3.]

The head of MPS (an NSF Assistant Director) creates a Directorate draft request which then is folded into priorities across the Foundation, with input as appropriate from the National Science Board (NSB). A complete NSF budget request for a given fiscal year, enumerating priorities and illustrated with Highlights provided by our Principal Investigators (we really do use these to help make the case for funding!) is sent to the Office of Management and Budget (OMB, a part of the Executive Branch) in the first week of September, about 13 months before the start of the relevant FY. Typically in late November, OMB provides feedback (called a “passback”) to the NSF request, enumerating questions, priorities, and required changes to better fit the Administration’s priorities. The Foundation then has a few days to discuss the passback with OMB and come to agreement. The final request is prepared during December and January, again with NSB input, as appropriate.

After final OMB approval, the “NSF Budget Request to Congress” is submitted to Congress during the first week in February, at which point it becomes public as part of the overall Presidential budget request. Congress may then pass a non-binding Concurrent Resolution which outlines total levels of spending and revenues, and broad spending priorities. Various sections of the request are next discussed in hearings by appropriate Congressional subcommittees and/or committees, “marking up” (modifying) the requests and ultimately creating twelve detailed appropriation bills for passage by the House and Senate, ideally in time for expenditures to commence with the start of the fiscal year on October 1. During this process, the Foundation may receive and respond to numerous “questions for the record” — questions from the Hill requiring written answers.

In many years, the appropriations bills do not pass by October 1; in such cases, bills called Continuing Resolutions are needed to extend spending authority in the absence of specific appropriations. Full-year Continuing Resolutions occasionally

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* More detail about this process can be found at various web sites, such as the Congressional Budget office (www.cbo.gov/aboutcbo/budgetprocess.shtml) or BudgetAnalyst.com (www.budgetanalyst.com/Process.htm). The OMB web site (www.whitehouse.gov/omb) provides links to individual budgets.

* This article is reprinted from National Science Foundation, Division of Chemistry, Newsletter, July 2009, No. 14.
happen, freezing spending at prior year levels or assigning a fixed increment or cut across all agencies.

The process isn't quite finished even once an appropriation is passed. Since appropriations rarely match requests, NSF must prepare an OMB-approved “current plan letter” to Senate and House Appropriation Committees, outlining how appropriated funds will be allocated across the agency. Since a year or more may have passed since the request was initially assembled, priorities have sometimes shifted by this stage. The final allocations require OMB and Congressional approval; it therefore can take a while even after passage of an appropriations bill for individual Programs to know what funds they have available to invest. Within the Chemistry Division, ultimate allocations reflect a combination of proposal pressure, technical priorities, and portfolio balance.

Note that at any given time, there is work under way involving at least three different fiscal years – we began developing the FY 2011 plan while we were spending FY 2009 funds and shepherding the FY 2010 budget through the appropriations process.

As most people know, FY 2009 and FY 2010 have been highly atypical years, in part because of the Presidential transition, and in part because of the “stimulus” package (the American Recovery and Reinvestment Act — Public Law 111-5 — a parallel process superimposed on the “usual” process).

Statistics describing the end results delivered to our Division are generally reported at our town hall meetings … .

**Why Should You Care?**

There are several points in this process where individuals can have an influence. At the earliest stages, you can help develop Divisional priorities simply by communicating with us or by participating in and organizing workshops. Your highlights help us make the case for why our priorities should be the Directorate’s, the Foundation’s, and the Government’s priorities as the process moves forward. As a citizen, you may also make your opinions known to your legislators, who ultimately determine what gets appropriated.
120.2 Recovery Act Funds Come With Strings Attached
AIS editors

Some of the excitement over the $789 billion in research funding included in the American Recovery & Reinvestment Act of 2009 (Pub. L. No. 111-5, ARRA) gave way to a bit of panic, as the money came with unprecedented oversight — so-called “accountability and transparency” — including a quarterly reporting requirement. Complying with ARRA requirements requires the tracking and reporting of information that institutions have never tracked before, such as the number of jobs created.

It is clear that the reporting is less about funding information and more about what is accomplished with the funds; in other words, it is all about transparency. Although all grant funds under the Recovery Act were to have been awarded by the close of the federal fiscal year 2010 (October 1, 2010), reporting under the act will continue until all monies have been expended and reports are “final.”

Now that the Recovery Act research funding is “out the door,” grantees are reminded that the act contained specific funding, including for offices of inspectors general (OIG), to ensure accountability. Also, if an institution receives Recovery Act money, it is considered a high-risk grantee and A-133 auditors will be testing for section 1512 reporting compliance.

In a recent “Chairman’s Corner” blog posting at www.recovery.gov, Recovery Accountability and Transparency Board Chairman Earl Devaney wrote that “Recipient reporting is at the heart of the Board’s accountability program.”

Funds Must Be Spent by October 2013

In M-11-34, guidance issued September 15, 2011, OMB directs federal agencies, with a few exceptions, “to accelerate the spending of remaining Recovery Act funds in discretionary grant programs.” OMB warns that if those funds have not been spent by September 30, 2013, “agencies shall reclaim them.” According to the memo, agencies should communicate this requirement to grantees “through adding these

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Hours of operation as of May 2, 2011:

8 AM to 6 PM ET, Mon–Fri during reporting months; 9 AM to 5 PM ET, Mon–Fri during other months

It is suggested that you have the following info at hand before calling the Service Desk:

- User ID (e-mail address) (Is this the email address registered with CCR?)
- Information on who the POC is, if it isn’t you
- Name of agency that gave you the award and whether you are a prime or a sub
- Specific problems you are experiencing and any error messages you received
requirements to new grant agreements, modifying terms and conditions of existing grant agreements, or other appropriate written means.”

In mid-December 2011, the National Science Foundation issued a notice of its intent to revise American Recovery and Reinvestment Act award general terms and conditions “to ensure project completion by September 30, 2013.”

This notice applies to all NSF grantees with active awards that were issued pursuant to the American Recovery and Reinvestment Act of 2009 (ARRA). (The notice does not apply to cooperative agreements, which will be handled separately.) According to NSF, the purposes of the notice are to do the following:

1. Notify grantee organizations, principal investigators and co-PIs that NSF will be amending the terms and conditions of active ARRA awards. These amendments will revise the current automatic no-cost extension authority by eliminating the ability of awardees to extend the expiration date beyond September 30, 2013, without prior NSF approval.

2. Establish a procedure for grantees to request prior NSF approval for extensions beyond September 30, 2013.

3. Provide options for those grantees that are unable to accept the terms and conditions, as revised.


**Link:** www.nsf.gov/recovery/acceleration.pdf.

NIH proceeded similarly in NOT-OD-12-014, dated December 13, 2011. The notice (1) notified institutions and program directors/principal investigators that NIH is revising the terms and conditions on some active Recovery Act awards to amend the current automatic no-cost extension authority by limiting the ability for awardees to extend the final budget period of a project period to no later than September...
30, 2013, without prior NIH approval; (2) established a procedure for recipients to request prior NIH approval for extensions beyond September 30, 2013; and (3) provided options for those recipients unable to accept the revised terms of award.


Other agencies indicated they would be proceeding in a manner similar to NSF and NIH.

### Recovery Act and Single Audits

One of the main vehicles for ensuring accountability for ARRA funds is the Circular A-133 single audit. The 2009 Compliance Supplement, in Appendix VII: Other OMB Circular A-133 Advisories, contains an advisory devoted to the Recovery Act and how it will impact the single audit process. OMB issued the first addendum to the 2009 Compliance Supplement to address programs affected by ARRA in mid-August 2009 (although it was dated June 30, 2009) (see [www.whitehouse.gov/omb/assets/a133_compliance/arra_addendum_1.pdf](http://www.whitehouse.gov/omb/assets/a133_compliance/arra_addendum_1.pdf)).

OMB asked the Governmental Audit Quality Center of the American Institute of Certified Public Accountants to relay a clarification concerning when a program with both ARRA funding and other funding should be considered major for single audit purposes. The clarification is presented in GAQC Alert #123, available at the AICPA Web site, [www.aicpa.org](http://www.aicpa.org).

Buried in OMB guidance M-09-15 is a statement that “For fiscal years ending September 30, 2009, and later, all Single Audit reports filed with the Federal Audit Clearinghouse (FAC) will be made publicly available on the internet.” Single audits are currently available to the public under the Freedom of Information Act (FOIA), but FAC’s policy has been to refer such FOIA requests to the cognizant agency responsible for the report, so that the agency can remove any personally identifiable information in the report before release. A footnote in the OMB guidance justifies this public release requirement and suggests ways for the FAC to avoid disclosure of any PII. (Link to FAC: [http://harvester.census.gov/sac](http://harvester.census.gov/sac).)

In March 2010, OMB issued M-10-14, Updated Guidance on the American Recovery and Reinvestment Act. Question 7 in the guidance, which is directed primarily to federal agencies, impacts all A-133 audits as follows:

- Agencies may not grant extensions for late single audit report filings for fiscal years 2009–2011, even if the audit does not include ARRA funding.
- If a single audit report has been late in one of the two prior audit years, the grantee may lose its low-risk status.
- Agencies are instructed to resolve within 6 months all single audit findings for Recovery Act programs.

### Role of the OIGs

OIGs at federal agencies are instructed to provide technical assistance and training for the auditing profession. They must also provide follow-up reviews of single
audit quality with emphasis on Recovery Act funds and prepare a synopsis of any audit findings related to those funds. OIGs are instructed to identify high-risk programs and non-federal entities using risk-assessment techniques and to target them for priority audits, inspections, and investigations, which can have quicker turnaround times than single audits.

No institution that received Recovery Act funds is immune from government review and possible audit, and the act contained specific funding, including for OIGs, to ensure accountability. The results of OIG reviews posted thus far reveal that, among other things, agencies are double-checking the accuracy of the data universities and others are reporting, comparing the information to what the auditors find.

In various recent Recovery Act “limited scope reviews,” the OIG at the Department of Health and Human Services found few or no problems (see Figure 120.2-2, page 120:18). Similar to the HHS OIG, the National science Foundation OIG refers to its Recovery Act funds activities as “limited scope reviews” and has conducted a number of these reviews (see Figure 120.2-3, page 120:20). OIG at the U.S. Department of Education also has issued a number of audits that look at states’ spending of funds under the American Recovery and Reinvestment Act, including State Fiscal Stabilization Fund awards to public institutions of higher education (see Figure 120.2-4, page 120:22).

Other Risks of Noncompliance

Part 1 of the M-10-08 ARRA guidance instructs federal agencies how to handle entities that fail to report or fail to report accurately and “when, and in what format” to report the entities to OMB. According to OMB, “federal agencies will be required to continuously evaluate recipient and sub-recipient efforts to meet” all relevant requirements. OMB warns recipients that noncompliance, including being persistently late or negligent in reporting, is subject to federal action, “up to and including the termination of federal funding or the ability to receive federal funds in the future.” In some cases, intentional reporting of false information could result in civil and/or criminal penalties.

Grantees: What and How to Report

Reporting entities (federal agencies, prime recipients, and delegated subrecipients) must register at FederalReporting.gov before they can submit reports. Before registering, institutions must already be registered in the Central Contracting Registration (CCR) database and have a Dun and Bradstreet Universal Number System (DUNS) number.

Reminder

Many state colleges and universities may have to comply with their individual state ARRA reporting requirements in addition to the special quarterly federal reporting. Such requirements have been imposed despite a request from OMB that states not issue additional ARRA reporting requirements. For information on state ARRA developments and contacts, go to www.staterecovery.org/state-responses.
Reports are submitted to FederalReporting.gov, where recipients and subrecipients enter data directly into the site following registration. Each report will be cumulative (except for jobs data). The reporting period quarters are based on a calendar year.

FederalReporting.gov provides a helpful visual of the reporting timeline, which is reproduced at page 120:25.

Recipient reporting data will be provided for download by federal agency and program officials. These files may be used to automate data quality reviews or create reports by federal agencies. Although the intent of the recipient reporting is primarily reporting as opposed to management, OMB says in its M-09-21 guidance (at Sec. 3.14) that federal agencies may use recipient reports to help assess compliance with the terms and conditions of the individual award agreements.

**Reviewing and Correcting Reports.** After submission of a report on the use and impact of funds received under ARRA, prime recipients still must ensure the data quality of the submission. Corrections can only be made for the reporting quarter (i.e., the most recent quarter), and recipients will have the ability to make corrections up until the start of the next reporting period.

Users of FederalReporting.gov have the ability to append a comment to a given report and respond to that comment. This is the process whereby the prime recipient informs delegated subrecipients of any data quality issues it sees in the sub’s data, and the subrecipient corrects the data. Similarly, an agency might comment on the data submitted, and the prime will respond to the comment.

**Jobs Created and Retained.** On December 18, 2009, the Office of Management and Budget released “M-10-08: Updated Guidance on the American Recovery and Reinvestment Act – Data Quality, Non-Reporting Recipients, and Reporting of Job Estimates.” The guidance updated OMB’s guidance issued in June 2009 (M-09-21.). The guidance (at Sec. 5.2) contains an overview of the key principles for reporting the estimated employment impact of Recovery Act-funded work and method of calculating jobs created or retained. Research administrators are reminded to review this guidance carefully, as this has been a finding in recent reviews of ARRA reporting (see previous discussion).

Jobs are reported on a quarterly, rather than cumulative, basis. Jobs partially funded by ARRA will only be counted based on the proportion funded. Also, a job that is paid initially with non-ARRA monies may be reported as created or retained as long as such dollars eventually will be reimbursed with ARRA funds.

According to Sec. 5.3 of the December 18, 2009 (M-10-08) guidance, the requirement for reporting estimates of the number of jobs is based on a calculation used to
avoid overstating the number of other than full-time permanent jobs. The requirement for reporting jobs is based on a calculation that converts part-time or temporary jobs into “full-time equivalent” (FTE) jobs. In order to perform the calculation, a recipient will need the total number of hours worked by employees in the most recent quarter (the quarter being reported) in jobs that meet the definition of a job created or a job retained by the Recovery Act. The recipient will also need the number of hours in a full-time schedule for a quarter.

For instance, if a full-time schedule is 2,080 hours/year, the number of hours in a full-time schedule for a quarter is 520 (2,080 hours/4 quarters = 520).

The guidance also presents a clarification specifically for higher education institutions that must comply with OMB Circular A-21 as follows:

For recipients of assistance agreements that must comply with OMB Circular A-21 … an alternative calculation based upon the allocable and allowable portion of activities expressed as a percentage is acceptable to estimate jobs created and retained. OMB Circular A-21 recognizes that practices vary among educational institutions as to the activity constituting a full workload. Compensation charged to sponsored projects must conform to the institution's established policies and reasonably reflect the activity for which the employee is compensated. Charges to sponsored projects may be expressed as a percentage of their total activities. Therefore, for purposes of ARRA reporting of jobs created or retained, colleges and universities may count, proportionately, the percentage of effort directly charged to ARRA awards as an FTE equivalent.

The guidance then presents two examples:

(1) Based on the total available time in the reporting period, regardless of when the grant period or employment period begins. For example, if a lab technician charges 100% effort on a project for only one month in the quarter being reported (but zero effort the other two months because no work was performed or the grant was not yet awarded), then the recipient report should reflect 0.33 FTE for that individual.

(2) For all reporting periods during which the grant is active. For example, if a researcher provides 100% effort in the grant’s first quarter and 50% effort in the grant’s second quarter, the recipient report for the first quarter will reflect 1 FTE and the second will reflect 0.5 FTE.

According to Sec. 5.8 of the December 18, 2009 (M-10-08) guidance, once a job is reported by a recipient as created or retained by the Recovery Act, the recipient shall continue to report this job as created or retained in subsequent quarters as long as the job continues to be funded by the Recovery Act. Also, a job that is paid initially with non-Recovery Act dollars may be reported as created or retained as long as such dollars eventually will be reimbursed with Recovery Act funds for the jobs being reported (see Sec. 5.8 of the guidance).

Subaward Reporting. According to OMB, prime recipients are responsible for submitting the reports required by ARRA and must include data for first-tier subrecipients if the subaward is greater than $25,000. For all first-tier subawards
that are less than $25,000, the awards are reported in the aggregate. The reporting requirements with respect to subawards of $25,000 or more in government funding are substantially the same requirements as for prime awards.

Although prime recipients are responsible for reporting the detailed data on subawards and vendor payments, different data is required for subrecipients than for vendors.

Sec. 2.3 of OMB’s M-09-21 guidance allows prime recipients to delegate to sub-recipients reporting responsibility for the subrecipient data elements, which are also required by the Federal Funding Accountability and Transparency Act (§3720.2); OMB often refers to these as FFATA data elements. While it may be enticing to delegate such reporting, it is clear that the prime recipient will be responsible for all of its data and, during the verification period, must verify subrecipient data as well. Also, the data elements that can be delegated are limited; reporting on percent of project completion and jobs retained/completed must still be reported as part of the prime recipient’s reporting.

Recipients must report jobs estimates for all subawarded funds. Recipients must include an estimate of jobs created and retained on projects and activities managed by their funding recipients in their aggregate number and their narrative description. This information will be provided for each project and activity funded by ARRA.
Figure 120.2-2: HHS OIG Reviews Under the Recovery

- Rutgers University received a grant under the NIH Challenge Grants in Health and Science Research initiative totaling $996,415 in Recovery Act funds. The purpose of the grant was for genome research. The grant budget period was March 24, 2010, through February 28, 2012. On December 6, 2011, Rutgers requested, and received, a no-cost extension through August 30, 2012. As of February 28, 2012, the university claimed $931,230 under the grant. OIG found no “discrepancies that would indicate” that the claimed costs were not allowable. It made no recommendations. Link: http://oig.hhs.gov/oas/reports/region2/21102010.pdf.

- A review of Georgetown University found that costs claimed were allowable under a Recovery Act award made by NIH in the amount of $3,907,801 for comparative effectiveness research. The budget period for the grant was September 30, 2009, through August 31, 2011. As of June 30, 2011, Georgetown had claimed $2,565,673 under the grant. OIG reviewed these costs, which consisted $2,361,075 for direct costs and $204,598 for indirect costs. It made no recommendations. Link: http://oig.hhs.gov/oas/reports/region3/31103302.pdf.

- In a Recovery Act review of the University of Utah, Salt Lake City, OIG auditors found, “Based on our review of judgmentally selected costs claimed under the grants, we determined that the grantee’s claimed costs of $1,359,814 were allowable under the terms of the grants and applicable federal regulations.” The review looked at grantee costs claimed through Sept. 29, 2011, for two NIH grants. During the review period, the grantee claimed $1,359,814. We reviewed $1,356,578 of these claimed costs. (Less than 100% of costs claimed were examined, due to materiality.) Link: http://oig.hhs.gov/oas/reports/region7/71106025.pdf.

- An audit of Northwestern University tested $199,657 of the $854,884 claimed by the university between Sept. 25, 2009, and July 31, 2011, under a $997,581 American Recovery and Reinvestment Act award from NIH for challenge grants in health and science research. According to the audit, all costs were allowable under the terms of the grant and applicable federal regulations. Link: http://oig.hhs.gov/oas/reports/region5/51100106.pdf.

- All ARRA grant costs claimed by the University of Central Florida were allowable. Auditors reviewed the college’s $1,310,749 NIH grant funded under the Recovery Act to enhance physically active lifestyles among urban older adults and low-income ethnic minorities. As of June 30, 2011, the grantee had claimed $705,541 ($486,760 direct and $218,781 F&A) costs. The audit had no findings or recommendations. Link: http://oig.hhs.gov/oas/reports/region4/41101006.pdf.

- There were no findings or recommendations in a review of Wayne State University of the Recovery Act grant it received from NIH from September 2009 through August 2011. According to OIG, “The $39,530 in grant costs covered by our review was allowable under the terms of the grant and applicable federal regulations.” No recommendations were made. Link: http://oig.hhs.gov/oas/reports/region5/51100097.pdf.

- Under the Recovery Act, the college Claremont McKenna College received an NIH $191,867 academic research enhancement grant for the period Sept. 1, 2009, through Aug. 31, 2012. As of June 30, 2011, Claremont had claimed $113,006 in costs: $38,600 for
salaries and wages, $37,394 in equipment costs, $19,647 in indirect costs, $8,843 in fringe benefits, and supply costs of $8,522. In a brief report, auditors concluded that the costs were “allowable under the terms of the grant and in accordance with applicable federal requirements.” Link: http://oig.hhs.gov/oas/reports/region9/91101008.pdf.

• According to the report of a review of The University of Texas Health Science Center, which looked at $1.5 million in Recovery Act funds the university received between July 1, 2009, and June 30, 2011, all expenditures were allowable, allocable, and reasonable, and there were no findings or recommendations. The funds were for genome-wide association studies. The university collaborated with four other universities and one hospital, “awarding them cost-reimbursable subawards totaling $568,274,” OIG said in the report. Link: http://oig.hhs.gov/oas/reports/region6/61100054.pdf.
• In one recent review, OIG found significant problems. Of 29 grants totaling $12.8 million awarded by NSF to the University of Alaska – Anchorage as of March 31, 2010, eight awards totaling $3.4 million (27%) were ARRA-funded. OIG previously released a report of its review of the university’s processes for quarterly ARRA reporting. The inappropriate expenditures cited in the report stemmed primarily from the withdrawal of two subrecipients that were approved in the award. See “Limited Scope Review: Improvements in Grant Management Needed at the University of Alaska – Anchorage,” 11-1-017 (Aug. 31, 2011).

• In this University of Alaska-Anchorage report auditors said the university properly segregated $3.4 million of NSF funds for eight Recovery Act grants, submitted quarterly reports timely, had sound written policies and procedures for the reporting and developed centralized Recovery Act reporting. But they also identified some issues, including reporting vendor jobs, checking debarment and suspension status of vendors and lack of a data quality review process to catch clerical and/or posting errors. Three data elements were incorrect — jobs, expenditures and vendor payments. The review also found that “the university had not established adequate processes to accurately report the number of jobs, expenditures and vendor payments” and did not have a process in place to assess whether a subrecipient had ever been debarred or was facing such action. The university concurred with the findings and recommendations and was making changes to address the areas of concern, the review said. See “Limited Scope Review of Recovery Act Quarterly Reporting Processes– University of Alaska – Anchorage,” 11-1-003 (March 10, 2011).

• West Virginia University Research Corporation properly segregated $3.1 million in ARRA funds for nine NSF grants, timely submitted the quarterly reports and centralized ARRA reporting. However, the OIG found that the institution’s “data quality review process did not preclude clerical posting and other human-related type errors” (for example, two NSF awards were reported twice), and it did not report Recovery Act jobs on payments of less than $25,000 to vendors. Four data elements reviewed were incorrectly reported: number of jobs, expenditures, funds received/invoiced and subawards. The university stated that it has already taken steps to implement the report recommendations. See “Limited Scope Review of Recovery Act Data Quality – West Virginia University Research Corporation,” 11-1-005 (March 10, 2011).

• New Jersey Institute of Technology properly segregated $6.7 million of ARRA funds for 10 grants, timely submitted ARRA reports and centralized ARRA reporting. OIG found, however, that NJIT had not established formal ARRA reporting guidance or a comprehensive data quality review process. As a result, NJIT did not correctly report three data elements: number of jobs, vendor payments and subaward data. For example, NJIT did not use a uniform methodology for estimating jobs, consultant charges were reported as both vendor and subaward payments, and there were no job estimates for a vendor payment of $18,000. The university generally concurred with OIG’s findings and recommendation. See “Limited Scope Review of Recovery Act Data Quality - New Jersey Institute of Technology,” 11-1-004 (March 10, 2011).
• The University of Washington properly segregated $42 million of ARRA funds for 80 NSF grants, timely submitted quarterly ARRA reports, had written ARRA reporting policies and procedures and centralized its ARRA reporting. OIG found, however, that UW needs to improve its processes and oversight for the reporting of project status and jobs created/retained for sub recipients and vendors. Six data elements were reported correctly, but project status was incorrectly reported for two grants, and there was no process for reporting jobs estimates for payments to sub recipients or vendors of less than $25,000. The university concurred with the findings and recommendations. See “Recovery Act Quarterly Reporting Processes at the University of Washington,” 11-1-015 (March 31, 2011).

• NSF released a memorandum dated June 18, 2010, summarizing the findings from five ARRA reviews (www.nsf.gov/oig/10_6_008_ARRA_Reporting.pdf). The reviews were conducted at California Institute of Technology, California State University Fresno Foundation, George Mason University, University of Colorado-Boulder, and University of Kentucky. The reviews focused primarily on the institution’s December 30, 2009, Recovery Act report OIG looked at the following data elements: number of jobs, job descriptions, expenditures, funds received/invoiced, vendor payments, subaward amounts, quarterly activities/project description, project status and final report status. In conducting its reviews, OIG looked at whether the auditee has an adequate system of internal controls to provide reasonable assurance that Recovery Act funds were segregated and separately tracked and whether quarterly reports were timely, accurate and compliant with Recovery Act and NSF reporting requirements.

   OIG did a follow-up review at Fresno and found it needed to “implement an effective labor effort reporting system for confirming the reasonableness of salary charges to sponsored projects and appropriately document NSF cost sharing commitments” (www.nsf.gov/oig/11-6-004-Fresno.pdf).

   Link: http://www.nsf.gov/oig/auditpubs.jsp
Figure 120.2-4: ED OIG Reviews Under the Recovery Act

- The University of South Carolina aced its ARRA audit. The audit, which looked at State Fiscal Stabilization Fund expenditures and ARRA reporting at USC and the South Carolina Department of Corrections, did not show any findings related to USC. The report did find that the jobs created or retained information reported by the state did not accurately reflect the jobs data reported to it by its grantees, which included those at Clemson University. See South Carolina Governor’s Office: Use of Funds and Data Quality for Selected American Recovery and Reinvestment Act Programs, A04K0006 (Aug. 23, 2011).

- In an audit of the state of Oklahoma’s use of Recovery Act funds, the OIG concluded that a state university used an incorrect method of calculating jobs retained or created with Recovery Act funds, resulting in an underreporting (see ARRA Alert). The audit spanned the period from February 17 through December 31, 2009. The state agreed with this finding and said it would instruct all institutions of higher education receiving Recovery Act funds to use the calculations required in OMB guidance. The audit also found that a community college used Recovery Act funds to maintain its computer system, an unallowable use of funds that the state agreed to return. The audit cited the state for inaccurate reporting related to $68 million in State Fiscal Stabilization Fund awards that were distributed to institutions but not reported as subawards in quarterly reports. The state agreed with the auditors to report subrecipient payments and said it would ensure that these relationships were properly delineated in the next quarterly report. See Oklahoma: Use of Funds and Data Quality for Selected American Recovery and Reinvestment Act Programs, A06K0002 (Feb. 18, 2011).

- ED OIG looked at the state of Utah’s use of Recovery Act funds. The review covered four education-related Recovery Act grants. It looked at selected costs charged to the grants from February 17 to December 31, 2009, and data reported for the quarterly reporting period ending December 31, 2009. Among the findings, OIG cited a state university as a subrecipient of SFSF funds for “improperly charging $55,000 to the SFSF-Government Services grant for an annual maintenance service agreement.” Sec. 14004(c)(1) of the Recovery Act and the state’s contract with the university “specifically prohibit the use of SFSF funds for maintenance expenditures, as well as equipment or facilities.” Neither the university nor Utah Science Technology and Research officials, the prime recipient, contested the finding. The university said it “would offset a future reimbursement claim by the amount of the improper charge.” USTAR added procedures “requiring in-depth reviews of subrecipients’ reimbursement claims,” according to the audit. The audit also found that jobs data was underreported at the university because of confusing guidance from the prime and at a community college, another subrecipient, because it was using incorrect data. Utah: Use of Funds and Data Quality for Selected American Recovery and Reinvestment Act Programs, A09K0001 (May 13, 2011).

- An audit of Illinois concluded that the state’s subrecipients generally expended ARRA funds properly, but one of the findings indicated that the University of Illinois reported incorrect data concerning the number of jobs created or retained as a result of its ARRA funds. According to the audit, the university over-reported the number of jobs created because it did not figure full-time equivalents (FTEs) correctly. The audit analyzed the university’s FTE calculations for 5,564 UI employees at Urbana-Champaign and Chicago who were paid with either SFSF-Education or SFSF-

- OIG found that the University of Missouri transferred its SFSF funds into its general revenue pool (as did local educational agencies with their funds), which included funds from other sources, and did not establish specific accounting codes to identify SFSF expenditures. Without specific codes, it was not possible to identify which expenditures were attributable to SFSF funds. The auditors noted that all of the expenditures were the types that would be allowable under SFSF, but “because the identified expenditures were not reflected in the University’s accounting records as being funded by SFSF, we cannot be assured that they are the actual expenditures paid with SFSF funds.” As a result, it was not possible to verify that salaries paid were justified by the number of hours worked, were similar to salaries of other employees paid with non-SFSF funds, and were not paid more than once for the same work. The auditors also noted that it was impossible to check the accuracy of jobs reporting for these funds because they were not tied to identifiable positions. OIG also found that the university did not adequately monitor its SFSF accounts for excess cash. The Missouri Department of Higher Education and the university both considered its payments to be on a reimbursement basis because the SFSF funds were divided into 12 monthly disbursements, and the first disbursement was made in September 2009, which included the monthly disbursements for July and August. Disbursements after September, however, were received at the beginning of the month and expended during the month, which the audit said could result in cash balances on hand before the university received subsequent disbursements. Because they were considered reimbursement funds, however, the university did not assign accounting codes for SFSF expenditures, and it neither monitored cash balances on hand before receiving disbursements nor calculated interest on excess cash. See Missouri: Use of and Reporting on Selected American Recovery and Reinvestment Act of 2009 Program Funds, A07K0002 (June 7, 2011).

**Link:** [http://www2.ed.gov/about/offices/list/oig/areports.html](http://www2.ed.gov/about/offices/list/oig/areports.html)
In Fiscal 2009, NSF’s ARRA Research and Related Activities program funded 4,599 awards that supported 6,762 investigators. More than one-third (2,352) were new investigators or new co-investigators; however, NSF had hoped to support 2,400. “ARRA enabled the funding of more than 300 proposals that had been declined earlier in the year due to budgetary constraints even though they were rated very good to excellent,” NSF said. These numbers and other ARRA and non-ARRA data are included in NSF’s “FY 2009 Performance and Financial Highlights.” Link: www.nsf.gov/pubs/2010/nsf10002/nsf10002.pdf

ScienceWorksForUS, a joint effort of the Association of American Universities, the Association of Public and Land-grant Universities, and The Science Coalition, issued American Recovery and Reinvestment Act One Year Later: Recovery Act-Funded Research Advancing Science, Aiding the Economy and Contributing to America’s Prosperous Future. The February 2010 report describes approximately 100 projects, including “research on diseases, energy, climate, science education, and a host of other areas that are sustaining or creating new jobs in the short run and hold the promise of breakthroughs that can lay the foundation for long-term prosperity.” Link: www.scienceworksforus.org/press-releases/universities-highlight-benefits-of-stimulus-research-funding

NIH has posted a “collection of Recovery Act Investment Reports highlighting investments in biomedical research topics all made possible” by the Recovery Act. “While these investment reports describe work being supported through approximately 2,000 ARRA grants, this is only a subset of the more than 12,000 grants that have been awarded through ARRA,” according to NIH. Link: http://report.nih.gov/newsupdates.aspx

The Association of American Medical Colleges has prepared a report “detailing how the nation’s medical schools and teaching hospitals are advancing science, improving health, and stimulating economic growth with funding provided to NIH” under ARRA. The report, From Recovery to Discovery – ARRA Funding and Medical Research, was released in February 2010. Link: www.aamc.org.
Figure 120.2-6: ARRA Reporting Timeline
§120.3 What Is an FFRDC?
AIS editors

A federally funded research and development center (FFRDC) is an organization that helps the federal government conduct scientific research and development, analysis, acquisition, and systems engineering and integration. “The missions and core competencies of the nation’s FFRDCs support the diverse research and development requirements of their sponsors, which provide guidance and oversight of the FFRDCs’ work.”1

The contractors that manage and operate FFRDCs include universities, private companies, nonprofit organizations, or consortia thereof. Technology transfer is a federal priority at FFRDCs (see ¶1930.3). There are basically three types of FFRDCs, as defined by the Department of Defense:

◆ **Research and development laboratories** fill voids where in-house and private sector research and development centers are unable to meet agency core area needs. Specific objectives for these FFRDCs are to (1) maintain over the long-term a competency in technology areas where the government cannot rely on in-house or private sector capabilities, and (2) develop and transfer important new technology to the private sector so the government can benefit from a wider, broader base of expertise. R&D laboratories engage in research programs that emphasize the evolution and demonstration of advanced concepts and technology, and the transfer or transition of technology.

◆ **Study and analysis centers** deliver independent and objective analyses and advise in core areas important to their sponsors in support of policy development, decision making, alternative approaches, and new ideas on issues of significance.

◆ **System engineering and integration centers** provide required support in core areas not available from sponsor’s in-house technical and engineering capabilities to ensure that complex systems meet operational requirements. The centers assist with the creation and choice of system concepts and architectures, the specification of technical system and subsystem requirements and interfaces, the development and acquisition of system hardware and software, the testing and verification of performance, the integration of new capabilities, and continuous improvement of system operations and logistics. They often play a critical role in assisting their sponsors in technically formulating, initiating, and evaluating programs and activities undertaken by firms in the for-profit sector.

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1 See [www.mitre.org/about/ffrdcs.html](http://www.mitre.org/about/ffrdcs.html).
**Amount of Funding**

The National Science Foundation report, *FFRDC Research and Development Expenditures: Fiscal Year 2009* (www.nsf.gov/statistics/ffrdc), contains the most recent funding statistics on research and development expenditures at the nation’s 39 FFRDCs. According to Fiscal Year 2009 data from NSF’s Survey of Research and Development Expenditures at FFRDCs, annual spending increased in FY 2009 to $15.2 billion (see Figure 120.3-1).

In FY 2009 basic research activities accounted for 38.5% of total FFRDC R&D expenditures; applied research, 30.5%; and development, 31.0% (see Figure 120.3-1). University-administered FFRDCs were the least likely of the three types of institutions conducting federally funded research to conduct applied research (26%) but the most likely to conduct development (38%).

NSF reports additional types of FFRDCs expenditure data, including by federal agency, at www.nsf.gov/statistics/fedsupport.

**Figure 120.3-1: Total and Federally Financed R&D Expenditures at Federally Funded R&D Centers, by Type of FFRDC, FYs 2006–2010**

<table>
<thead>
<tr>
<th>Type of FFRDC</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total R&amp;D, all FFRDCs</td>
<td>13,218,497</td>
<td>13,824,987</td>
<td>14,707,088</td>
<td>15,220,621</td>
<td>16,814,698</td>
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<tr>
<td>University-administered FFRDCs</td>
<td>7,790,137</td>
<td>5,855,193</td>
<td>4,701,645</td>
<td>4,958,944</td>
<td>5,341,437</td>
</tr>
<tr>
<td>Nonprofit-administered FFRDCs</td>
<td>2,859,751</td>
<td>3,189,208</td>
<td>3,689,108</td>
<td>3,827,802</td>
<td>4,190,128</td>
</tr>
<tr>
<td>Industry-administered FFRDCs</td>
<td>2,568,609</td>
<td>4,780,586</td>
<td>6,316,335</td>
<td>6,433,875</td>
<td>7,283,133</td>
</tr>
<tr>
<td>Federally financed R&amp;D, all FFRDCs</td>
<td>12,824,552</td>
<td>13,401,081</td>
<td>14,262,947</td>
<td>14,784,361</td>
<td>16,367,226</td>
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<tr>
<td>University-administered FFRDCs</td>
<td>7,600,335</td>
<td>5,654,952</td>
<td>4,550,332</td>
<td>4,811,485</td>
<td>5,188,709</td>
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<td>Nonprofit-administered FFRDCs</td>
<td>2,729,011</td>
<td>3,052,730</td>
<td>3,536,795</td>
<td>3,687,331</td>
<td>4,042,711</td>
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<td>Industry-administered FFRDCs</td>
<td>2,495,206</td>
<td>4,693,399</td>
<td>6,175,820</td>
<td>6,285,545</td>
<td>7,283,133</td>
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### Figure 120.3-2: R&D Expenditures at Federally Funded R&D Centers, by Work and Type, FY 2009 and FY 2010

<table>
<thead>
<tr>
<th></th>
<th>All R&amp;D expenditures</th>
<th>Basic research</th>
<th>Applied research</th>
<th>Development</th>
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<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All FFRDCs</td>
<td>16,814,698</td>
<td>6,653,928</td>
<td>5,180,025</td>
<td>4,980,745</td>
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<tr>
<td>University-administered</td>
<td>5,341,437</td>
<td>2,206,218</td>
<td>1,266,483</td>
<td>1,868,736</td>
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<tr>
<td>Nonprofit-administered</td>
<td>4,190,128</td>
<td>1,567,147</td>
<td>1,653,026</td>
<td>969,955</td>
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<td>7,283,133</td>
<td>2,880,563</td>
<td>2,260,516</td>
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<thead>
<tr>
<th></th>
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<th>Percent distribution</th>
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<tbody>
<tr>
<td>All FFRDCs</td>
<td>100.00%</td>
<td>39.57%</td>
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<tr>
<td>University-administered</td>
<td>100.00%</td>
<td>41.30%</td>
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<td>Nonprofit-administered</td>
<td>100.00%</td>
<td>37.40%</td>
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<tr>
<td>Industry-administered</td>
<td>100.00%</td>
<td>39.55%</td>
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<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Percent distribution</th>
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<td>All FFRDCs</td>
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<td>38.63%</td>
</tr>
<tr>
<td>University-administered</td>
<td>100.00%</td>
<td>36.38%</td>
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<tr>
<td>Nonprofit-administered</td>
<td>100.00%</td>
<td>39.99%</td>
</tr>
<tr>
<td>Industry-administered</td>
<td>100.00%</td>
<td>39.55%</td>
</tr>
</tbody>
</table>


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**Federally Funded R&D Centers**

The following listing of the FFRDCs can also be found online at www.nsf.gov/statistics/ffrdclist.

**Sponsor: Department of Energy**

- **Ames Laboratory**
  - www.ameslab.gov
  - Administrator: Iowa State University of Science and Technology
  - Location: Ames, IA

- **Argonne National Laboratory**
  - www.anl.gov
  - Administrator: U. Chicago Argonne, LLC
  - Location: Argonne, IL

- **Brookhaven National Laboratory**
  - www.bnl.gov/world
  - Administrator: Brookhaven Science Associates, LLC
  - Location: Upton, Long Island, NY

- **Fermi National Accelerator Laboratory**
  - www.fnal.gov
  - Administrator: Fermi Research Alliance, LLC
  - Location: Batavia, IL

- **Idaho National Laboratory**
  - www.inl.gov
  - Administrator: Battelle Energy Alliance, LLC
  - Location: Idaho Falls, ID

- **Lawrence Berkeley National Laboratory**
  - www.lbl.gov
  - Administrator: University of California
  - Location: Berkeley, CA

- **Lawrence Livermore National Laboratory**
  - www.llnl.gov
  - Administrator: Lawrence Livermore National Security, LLC
  - Location: Livermore, CA

- **Los Alamos National Laboratory**
  - www.lanl.gov
  - Administrator: Los Alamos National Security, LLC
  - Location: Los Alamos, NM

- **National Renewable Energy Laboratory**
  - www.nrel.gov
  - Administrator: Alliance for Sustainable Energy, LLC
  - Location: Golden, CO
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<thead>
<tr>
<th>Laboratory Name</th>
<th>Website</th>
<th>Administrator</th>
<th>Location</th>
</tr>
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<tr>
<td>Oak Ridge National Laboratory</td>
<td><a href="http://www.ornl.gov">www.ornl.gov</a></td>
<td>UT-Battelle, LLC</td>
<td>Oak Ridge, TN</td>
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<tr>
<td>Pacific Northwest National Laboratory</td>
<td><a href="http://www.pnl.gov">www.pnl.gov</a></td>
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<td>Richland, WA</td>
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<td>Sandia National Laboratories</td>
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<td>Sandia Corporation, a subsidiary of Lockheed Martin Corp.</td>
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www.caasd.org  
Administrator: MITRE Corp.  
Location: McLean, VA  
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**Center for Enterprise Modernization**  
www.mitre.org/about/ffrdc/cem.html  
Administrator: Center for Enterprise Modernization, MITRE Corp.  
Location: McLean, VA  
Sponsor: Department of the Treasury, IRS, VA

**Center for Nuclear Waste Regulatory Analyses**  
www.swri.org  
Administrator: Southwest Research Institute  
Location: San Antonio, TX  
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**Frederick National Laboratory for Cancer Research**  
http://web.ncifcrf.gov/  
Administrator: SAIC-Frederick Inc., a subsidiary of the Science Applications International Corp.  
Location: Frederick, MD  
Sponsor: Department of Health and Human Services, National Institutes of Health

**Jet Propulsion Laboratory**  
www.jpl.nasa.gov  
Administrator: California Institute of Technology  
Location: Pasadena, CA  
Sponsor: NASA  
Judiciary Modernization Center

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1 The following portions of RAND Corp. are FFRDCs: National Defense Research Institute (formerly Defense/Office of the Joint Chiefs of Staff), Project Air Force, and the Arroyo Center.
\section*{120.4 Compliance Costs Continue to Increase}

AIS editors

The compliance burdens and costs associated with federal sponsored research are increasing, difficult to measure, and spread out among various departments on a campus, according to a recent document jointly compiled by the Council on Governmental Relations, Association of American Universities, and Association of Public and Land-grant Universities. They said that “the current regulatory climate has become dysfunctional.” (Link to document: www.aau.edu/WorkArea/Download-Asset.aspx?id=11660.)

They wrote, “It is important to note that there are caveats associated with this information and usually, it is difficult to answer the seemingly simple question, ‘How much does it cost universities to comply with any particular regulation?’ with a precise number.” Reflected also as lost productivity, the costs are rising much faster than are other expenditures. Universities, out of fear, may overdo their compliance efforts, adding to costs, the organizations said.

The organizations recommend that the federal government, in cooperation with universities, undertake a “serious” effort “to better account for, track, and reduce regulatory costs.” Assistance is needed now, the groups concluded.

\textbf{Examples of Costs Burdens Presented}

The document includes examples of challenges with compliance costs from their memberships, such as the following:

\begin{itemize}
  \item “An environmental health and safety office at one private university in the West reported that they spend approximately 70\% of its total general fund budget in support of research safety and compliance in research.
  
  \item “One public university in the Northeast noted that the costs of managing its Sponsored Project Administration cost pool increased from $3.5 million in fiscal 2005 to nearly $6 million in fiscal year 2010. Another, a private institution in the Midwest, estimated that its costs had increased from $4.2 million in 2002 to $7.3 million in 2008.
  
  \item “A prominent medical school in the Southeast saw its compliance and quality assurance costs increase from approximately $3 million in 2000 to $12.5 million in 2010.
  
  \item “An urban public university in the West reported that its Sponsored Project Administration costs allocated to the administrative component of its facilities and administrative rate increased 86\% from 2001 to 2009, while its direct expenditures increased only 53\% during the same time period.
  
  \item “A private university in the South told us that its research-related administrative costs increased by nearly 120\% between fiscal year 2002 and 2010, whereas its direct expenditures had increased by less than 100%.
\end{itemize}
◆ “A public university in the Midwest reported that the last estimate to purchase necessary software from an external vendor was over $500,000, exclusive of all the implementation and training costs devoted to it. A public university in the West estimated the cost of its system at $435,000 annually. System implementation for a private university in the South cost $443,000.

◆ “One private university in the Midwest estimated that on its campus there are over 6,000 effort reports completed three times per year, resulting in more than 18,000 effort reports processed per year overall. Estimating that 60–90 minutes were spent on each effort report — including issuing instructions, completion by faculty and staff, administrative review, tracking, and storing — yields a conservative estimate of 20,000 hours per year spent on this process. Several universities reported that overall they spent in the range of $500,000 to nearly $1 million annually on effort reporting alone.”

The examples of burdens and costs was included in a paper containing recommendations submitted to the National Research Council to answer the question NRC posed, “What are the top ten actions that Congress, the federal government, state governments, research universities, and others could take to assure the ability of the American research university to maintain the excellence in research and doctoral education needed to help the United States compete, prosper, and achieve national goals for health, energy, the environment, and security in the global community of the 21st century?” (Link to NRC project: www8.nationalacademies.org/cp/project-view.aspx?key=49219.)

In a parallel effort, COGR also tallied “Federal Regulatory Changes Since 1991” that “affect the conduct and management of research under federal grants and contracts.” (Link to document: www.cogr.edu/viewDoc.cfm?DocID=151793.)

For another look at the costs and burdens of research, see the results of the Faculty Burden Survey conducted under the auspices of the Federal Demonstration Partnership (¶3360.1).
120.5 Turnover and Retention: Why Do So Many Leave, But Some of Us Stay?

Lauren Magruder, Virginia Tech

Like most of you in research administration, I constantly dread the latest e-mail announcement that one of our teammates is leaving our office and our field. It happens too often. While we are happy for their future plans, our thoughts tend to focus on who will take on their duties, how long will the interview process take, and when will we find time to train the new employee.

The focus of my MPA Professional Paper was on career ladders as a method to reduce turnover in sponsored programs offices. I wanted to share some of the information I found with you and also open a discussion about this issue. Several of the sources I used examined why people stay instead of the more studied issue of why people leave. This made me wonder why those of us who have been doing this for a while continue within research administration. I also wanted to learn more about what we can do as managers to improve employee retention.

Employee turnover or retention in research administration has been an issue for many years. It is becoming more of a problem as the information needed to become a successful administrator continues to grow and become more complex. Our jobs often require a greater level of experience and confidence as the learning curve becomes steeper and gray areas increase.

As research administrator positions turn over, providing good support to departments and faculty members becomes more difficult. Remaining administrators are often over-burdened with additional work and training duties. They may become less engaged and start to look for new opportunities. This can lead to multiple administrators leaving at once. I personally refer to this as the snowball effect.

Mitchell, Holtom, Lee, Sablynski, and Erez examined job “embeddedness” (2001, pp. 1102–1121). Job embeddedness is the sum of all internal and external components that influence an individual to remain at his or her current job, or to leave that job. Understanding these components allows managers to influence them in positive ways that will help their employees feel more attached to the organization. Mitchell et al., argue that by measuring job embeddedness as a causal indicator, an organization can predict turnover (2001, pp. 1102).

The components of job embeddedness they examined are links, fit, and sacrifice. They see links as the important relationships that workers have with the environment around them, including family, friends, and co-workers. There are pressures from these linkages to continue to work. Leaving a position could diminish these links or reduce them entirely (Mitchell et al., 2001, pp. 1104-1105). Fit is related to how well a person’s values fit within the goals and culture of the organization, as

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1 This article is reprinted from the *NCURA Magazine*, Vol. XLIII, No. 3, May-June 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
well as the community as a whole. A good fit may result in an increased attachment to the organization (Mitchell et al., 2001, pp. 1104-1105).

Finally, sacrifice is made up of the costs and loss of benefits beyond money that are associated with leaving a job. One may have to give up interesting projects and co-workers. If the benefits of leaving are greater than the benefits of staying, turnover is likely. Keeping employees engaged and excited about their work could improve retention (Mitchell, et al., 2001, pp. 1104-1105).

Although it would be difficult to measure every employee’s embeddedness level, being aware of these components gives managers the opportunity to address related issues and encourage attachment. Links could be strengthened by social activities at work such as monthly birthday celebrations and recognition of life events like wedding showers or employment anniversaries. Fit could be increased by evaluating administrators’ strengths and focusing their efforts in areas that interest them when available. Providing access to training and mentoring may also be beneficial to increasing one’s fit. Reducing sacrifice may include educating staff about long term employment benefits or introducing a career ladder with clear steps for advancement.

Oscar Grusky also studied a related concept of employee commitment (1966, pp. 488-503). In his article, “Career Mobility and Organizational Commitment,” Grusky hypothesized that “(1) the greater the rewards received, the greater the degree of the person’s commitment, and (2) the greater the obstacles the person has to overcome in order to obtain the organization’s rewards, the greater his commitment. (Grusky, 1966, p. 488)”

Grusky studied four areas of commitment. These included seniority, identification with the company, attitude toward management, and general satisfaction. His conclusions revealed that the first hypothesis above was not supported, but the second hypothesis was supported (Grusky, 1966, p. 488). These studies were applicable to research administration because they address the issue of why people stay and provide opportunities to encourage administrators to stay beyond pay increase or flex time that are often unavailable. It seems that it is not always what a person gets out of a job, but what they have personally invested that creates commitment to the organization.

Long-term research administrators may stay because we have personally invested in the field of research administration. This investment may be in the form of advanced training, certification, or internal office processes and involvement. As managers, we should provide opportunities for our new employees to become more engaged with research administration. They need to see it as a career and not simply a job at the university.

Research administrators and management must often be reactive to retention issues, and have difficulty creating proactive solutions. Some research administration organizations may have developed specific programs to curb turnover, but there is no one fix for every situation. Ways of analyzing and reducing turnover vary within professions, but good comparisons, such as with teachers and nurses, are available.
Continuing to share experiences with each other through such organizations as NCURA will also help universities to see what each are doing and adapt models to their needs. The future for sponsored research is busy, but bright, if research administration managers can be proactive in their efforts to retain administrators.

References


About the Author

Lauren Magruder is an Associate Director of Pre Award in the Office of Sponsored Programs at Virginia Tech. Her responsibilities include the management of a Pre Award Team of five administrators, drafting budgets, reviewing and submitting proposals as well as the negotiation of research awards. Lauren received a BS in Sociology from Frostburg State University and a Masters in Public Administration from Virginia Tech. She is also a Certified Research Administrator.
Nine Things Successful Research Administrators Do Differently
Denise Moody, Princeton University, Robyn Remotigue, Mississippi State University and Kevin Stewart, University of California, Santa Barbara

University research administrators will once again enter a new year filled with the anticipation of the release of new federal regulations and the fulfillment of our institutions’ obligations to existing regulations. As a primary example, all institutions must address the requirements of the National Institutes of Health’s (NIH) new financial conflicts of interest (FCOI) regulations within 365 days after its original release date in the Federal Register (August 2011). The complexity and breadth of the requirements prove once again that the research administration world is continuously evolving and challenging, so we must establish individual resolutions and professional goals for ourselves in order to be successful.

Dr. Heidi Grant Halvorson, a Harvard Business Review writer, recently described Nine Things Successful People Do Differently, which can easily translate to Nine Things Successful Research Administrators Do Differently.

1. Get specific
A successful research administrator is a multi-tasker who provides prompt customer service to their colleagues, faculty, and sponsors. In addition to our routine responsibilities and special projects, we constantly encounter unexpected inquiries, requests, and urgent deadlines at any time throughout our work day. At the start of each day, we should set specific daily goals for ourselves for those tasks we believe we can realistically accomplish, while still allowing flexibility and room for the unexpected events. If you are working on a long-term project, you should break down the task into smaller increments which can be part of the list of daily goals. In addition to establishing specific goals, pre-award research administrators must pay specific attention to detail in all aspects of our jobs, such as a thorough proposal review prior to submission to the sponsor and a careful review of award terms and conditions.

2. Seize the moment to act on your goals
A successful research administrator can never procrastinate; you must seize the moment. Dr. Halvorson states, “To seize the moment, decide when and where you will take each action you want to take, in advance” which results in “increasing your chances of success by roughly 300%.” Once you set your specific goals for the day, don’t delay. As soon as you have any opportunity during the day, take advantage of it. As we have all learned many times in our role, there’s never a “quieter” or “slow-
er” time to do something. There will always be more proposals, awards, e-mail messages, and phone calls in which we must respond to as quickly as possible. Another way to seize the moment is to complete those least desirable tasks first, whether it is to respond to a disgruntled faculty member, address a difficult personnel issue with a colleague, or review a very complex contract award.

3. Know exactly how far you have left to go

Part of creating and achieving your goals is to be realistic when establishing the list of goals and to constantly monitor your progress. As a research administrator, it’s easier to set and achieve goals that have hard deadlines in which everyone is working together towards the same result, such as a proposal submission date or a new federal regulation requirement. However, we face many responsibilities that require us to individually establish, review, revise, and perhaps even eliminate our goals. Coordinate closely with your supervisor and/or your colleagues if you find your goals a constantly moving target. According to Dr. Halvorson, “If you don’t know how well you are doing, you can’t adjust your behavior or your strategies accordingly.”

4. Be a realistic optimist

To be successful, research administrators must be confident in their ability to achieve their goals. Be a positive thinker when setting personal goals in order to increase your level of creativity and sustain your motivation. Be a realist and don’t underestimate the amount of time it will take to achieve your goal. Achieving goals takes time, patience, and persistence, which can all be driven by your optimism. Dr. Halvorson states, “Studies show that thinking things will come to you easily and effortlessly leaves you ill-prepared for the journey ahead, and insignificantly increases the odds of failure.”

5. Focus on getting better, rather than being good

As research administrators, we routinely find ourselves stepping outside of the four corners of our job descriptions to tackle a problem. Successful research administrators recognize the need to be more than just proficient in core job duties; we must adopt the mindset of lifelong learners as we continually refine our knowledge, skills and abilities. As James Casey noted in his article Observations on Building Offices of Opportunity, “any research administrator worth his or her salt knows that staying current in the field is a professional necessity.” This translates not only to the need to stay current on emerging policies and regulations that affect the research community, but to continually grow and evolve in our skills and abilities to address situations, solve problems, and better facilitate the forward movement of research. Additionally, the lifelong learner approach proves to be beneficial even on a more holistic level, as Dr. Halvorson notes that “people whose goals are about getting better, rather than being good, take difficulty in stride, and appreciate the journey as much as the destination.”

6. Have grit

Dr. Halvorson defines grit as “a willingness to commit to long-term goals and to persist in the face of difficulty.” Researchers are subjected to change on a daily basis. At the same time, this is a profession that experiences frequent turnover. Many of us spend time training new staff only to lose them to another office on campus or to another institution. As a result, this leaves the remaining staff filled in the gaps and feeling overburdened with the additional workload. Then, we hire new staff and begin the training process all over again. Do you ever ask yourself why you continue to stay, when so many others are making career changes, either by moving up the ladder or out of the profession altogether? In Lauren Magruder’s recent article entitled Turnover and Retention: Why Do Many Leave, But Some of Us Stay?, she shared an article written by Oscar Grusky that studies employee commitment. It seems that investment plays a major role in the life of a research administrator. According to Magruder, “it is not always what a person gets out of a job, but what they have personally invested that creates commitment... long-term research administrators may stay because we have personally invested in the field and it may be in the form of advanced training and certifications.” If this describes you, then you possess the characteristic of having grit.

7. Build your willpower muscle

A successful research administrator is a master of multi-tasking and juggling multiple (and at many times conflicting) priorities. As we continually reassess and reprioritize the tasks at hand on any given day, we can on occasion fall into the habit of pushing that one task that we’d rather not do further down our priority list. Before we know it, that low-priority task that we’ve been avoiding has become our top pressing issue that needs immediate attention. Tying in to the principle to Seize the Moment in (2) above, it turns out that by doing exactly those tasks that we don’t want to do, we are not only achieving greater efficiency in our work, but we are making it easier for ourselves in the future when faced with similar circumstances. In other words, we are strengthening our willpower “muscle.” Dr. Halvorson defines the concept of willpower as a muscle, and confirms this idea for building willpower by instructing us to “take on a challenge that requires [us] to do something that [we’d] honestly rather not do,” and notes that “it will be hard in the beginning, but it will get easier, and that’s the whole point.”

8. Don’t tempt fate

Regardless of the level of our dedication to a task and strength of our willpower “muscle”, we must, as research administrators, recognize that even our willpower is a finite resource, and there are instances where no amount of individual willpower alone will fully address the pending inquiry, the last-minute request, or the same-day deadline. It is important for us to have the perspective to recognize when we

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need to ask for additional time and/or resources, and/or enlist the assistance of our colleagues and/or supervisors.

9. Focus on what you will do, not what you won’t do
In research administration, it is easier to focus on what you won’t do or can’t do rather than what you will do or can do. As research administrators, when you are working with your faculty, try focusing on what you will do for them versus what you won’t or can’t do. Admittedly, it is sometimes very difficult to do this. Too often, we spend a great amount of energy focusing on what we won’t or can’t do, such as change a policy or federal regulation. We should use this energy and focus on what we will do for them. In other words, look for a more creative or outside-the-box opportunity to demonstrate what you will do for your faculty and not the other way around. In the end, it becomes a win-win for both you and faculty.

Conclusion
Whether it’s a new federal regulation, a revision to an institutional policy, or even just a problem issue on your desk — there will always be some looming responsibility on the horizon that a research administrator must prepare for while handling all of the day-to-day tasks. But we should take heart in and draw from Dr. Halvorson’s message that “decades of research on achievement suggests that successful people reach their goals not simply because of who they are, but more often because of what they do.” There are undoubtedly additional tools, tips, and techniques out there that keep successful research administrators current, proficient, and diligent. Let these nine “things” be your baseline guide for your approach to what you “do” in 2012 – and let us all celebrate our successes!

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Managing Risk and Uncertainty in Large-Scale University Research Projects
Sharlissa Moore and R. F. Shangraw, Jr., Arizona State University

The number of large, complex research projects managed by universities is growing in size and scope. Additionally, industries are shifting more research projects to universities (Hall, Link, & Scott, 2003). At Arizona State University (ASU), for example, the amount of annual funding for sponsored projects over $5 million has risen from $10 million to $40 million over the past twenty years (Raudenbush, 2011). Large-scale research projects (over $50 million) pose management challenges and risks because they are often complex and unpredictable, involve new technologies, involve a large number of stakeholders and institutions, and extend over a long time scale (Bonnal, Jonghe & Ferguson, 2006). The traditional project management (PM) literature offers a number of methodologies for managing risk and uncertainty in large-scale projects, with a focus on minimizing cost and schedule overruns. However, universities are not known for the implementation of sophisticated project management systems and the management methodologies may fall by the wayside of ‘getting the science right.’ The relatively new field of research project management (RPM) is still developing its professional identity and gaining legitimacy, and scientists have resisted managers’ attempts to engage in research project management (Sapienza, 2004; Schuetzenmeister, 2010).

As the scope and size of research projects expand, universities have become major players, and sometimes leaders, in multi-million dollar research and development (R&D) projects. For example, in 2009, the National Science Foundation (NSF) awarded over $200 million to the University of Wisconsin-Madison to construct a deep-ice neutrino detector, called IceCube, in Antarctica. In 2007, the National Institutes of Health (NIH) awarded over $63 million over three years to George Washington University to develop a Diabetes Prevention Program. Over the past decade, NASA has granted several dozen awards over $100 million to universities for first-of-a-kind spacecraft research and development, including Genesis, Deep Impact, and Galex. These research projects are often: (1) extremely complex; and (2) decentralized, with work occurring at multiple institutions and across disciplines; and (3) may change dramatically in scope. All of these risk factors contribute to cost and schedule overruns in large-scale projects.

This paper explores the current population of completed or nearly completed large-scale university-run research projects and then examines the relationship between university management techniques and project success. We demonstrate that a significant amount of funding is spent on university-led projects larger than $50 million and argue that large-scale research project management techniques should be improved in order to increase project success. We begin by discussing how large-scale projects are defined and characterized in the literature and how we apply these characteristics to large-scale university-run research projects. Next, we discuss

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1 This article is reprinted from the Research Management Review, Volume 18, Number 2, Fall/Winter 2011. It is used with permission of the publisher.
a number of challenges facing university research project managers. We then offer an overview of project outcome measures, primarily cost, schedule, and technical performance, and discuss how these apply specifically to R&D. Next, we describe our methodology for developing a sample of large-scale university-run projects, which we believe is the total population minus U.S. Department of Defense projects. We describe the attributes of this population, finding a median university total project cost expenditure of $93,586,025 and an average project timescale of seven years. Finally, we share some preliminary findings from our survey of managers of these projects. While many university projects meet their overall technical objectives, many do so by overrunning the original cost and by slipping the initial schedule.

**What Is a Large-Scale Research Project?**

The large-scale project and its even larger counterpart, the megaproject, are often defined based on cost ranges, though these cost ranges vary throughout the literature. For example, Flyvbjerg (2007) defined large-scale projects as those that cost between $100 million and several billion dollars. He defined megaprojects as projects over $1 billion with a lifetime of 50 years or more (Flyvbjerg, 2005). Merrow (1988) defined large-scale projects as those over $500 million, and he defined projects over $1 billion as “very large projects.” Large-scale research projects, however, are generally lower in cost than the large-scale infrastructure projects on which much of the literature on large-scale projects focuses. Further, projects on which the university is the lead manager are typically on the lower end of the large-scale research project cost range.

For the purposes of this study, we used a cost threshold of over $50 million in total project costs to characterize large-scale research projects, of which there are roughly 58 U.S. university-led projects in the United States (as of 2010). This choice was empirically driven. If we had used the $100 million cut-off from the literature described above, the sample would have been limited to 21 projects and skewed toward National Aeronautics and Space Administration (NASA) and U.S. Department of Energy (DOE) projects led by California Institute of Technology (Caltech) and Stanford University. Types of scientific and technical research projects over $50 million include the construction of complex scientific instrumentation; the construction of first-of-a-kind spacecraft; the design of innovative weapons systems; the construction of large-scale, first-of-a-kind computing infrastructure; longitudinal clinical trials; and bioscience research projects with a singular objective. Due to our focus on university management, we did not address scientific megaprojects, which are typically over $1 billion and international in scope, and extend over decades (Cross, 2009). Scientific megaprojects are often managed by one or more government agencies rather than universities. Examples of megaprojects include the International Space Station, the Human Genome Project ($3 billion), and the Superconducting Super Collider (expected cost of $8 billion, but cancelled in 1993). While these “Big Science” projects garner much attention, guidance and program evalua-

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2 In this study, ‘research’ describes the spectrum of fundamental and applied scientific research as well as innovative technology projects.

3 This excludes the U.S. Department of Defense projects, for which data were unavailable.
tion are also needed on middle-range university-led projects, which also represent significant research expenditure.

We defined a project as having a clear objective and timescale and a definable outcome. In contrast, many large-budget scientific operations are research programs with components at multiple universities, across scientific domains, and sometimes representing several countries. Basic research at this funding scale tends to be conducted at dozens of universities working to fulfill a research center’s typically broad mission. NIH funds a number of research programs distributed across multiple universities, such as the Center for AIDS research, national/regional primate research centers, and the general clinical research center. These did not fall under our definition of a project.

Basing the definition on a range of total project costs is likely not the only, and perhaps not the most useful, metric for characterizing these large-scale research projects in a way that facilitates understanding of the management challenges they pose. Large-scale research projects are also often highly complex and uncertain, extend over long time scales, and involve a large number of stakeholders and researchers. Bonnal et al. (2006) characterized large-scale projects based upon the following factors: number of contributors to the project; number of activities the project seeks to perform and the relative complexity of these activities; number of intermediate deliverables that are produced throughout the project’s execution; number of activities outsourced to external contractors; and project duration that can span over a decade, making it difficult to define the long-term objectives of the project at the project’s conception. In fact, these characteristics are more relevant to research projects, which may have smaller budgets than construction projects but be extremely complex in terms of the number of involved actors and institutions; the number of experiments and activities; the long time periods, particularly until the science is translated into a societal benefit; and the number of stakeholders ranging from human subjects to the policymakers and taxpayers funding the research. In summary, large-scale research projects, for the purposes of this study, have a clear and achievable research goal, are very complex, often involving uncertain technologies, typically involve a large number of actors and institutions, often involve relatively long time scales, and cost over $50 million in total project costs.

**The Challenges of Managing Large Projects at Universities: Management Knowledge and the Research Management Profession**

Universities are being called upon to manage increasingly large research and technology development projects, but there has been a surprisingly small subsequent gain in the systematic knowledge of the challenges and risks involved with university research project management (RPM). Universities face challenges in each stage of managing large-scale projects: winning the project, defining the project, and managing the project. Universities face two key conceptual issues when managing large-scale projects. First, universities are not designed as project management organizations and therefore are not necessarily equipped to manage these behemoth projects in an efficient manner. Second, research does not progress in a linear fashion in the way that construction projects often do. Research project managers face
the discovery paradox, meaning that discovery occurs in serendipitous ways, but existing management techniques are typically linear and prescribed.

To address these challenges, 1) knowledge of university project management is needed, and 2) experienced research project managers are needed. We will address the need for RPM knowledge first. The traditional project management profession has developed a set of project management tools based initially on experience with construction and infrastructure projects. These tools have been refined for large-scale weapons systems, environmental clean-up and restoration projects, and large-scale information technology projects. This experience and research have even been synthesized in a number of publications, including the Project Management Body of Knowledge published by the Project Management Institute. However, higher education institutions are often the slowest adopters of project management (Kralevich, 2008). While there is some synergy with traditional project management techniques and research project management, PM techniques designed specifically for university are lacking (Austin, 2002; Erno-Kjolhede, Husted, Monsted, & Wenneberg, 2001; Powers & Kerr, 2009). This is a gap in need of further research.

As mentioned above, these research project managers face the scientific discovery paradox. Geles et al. (2000) argued that most project management strategies were designed for business, not science; further, this literature is not rigorous. Geles et al. outlined some of the project management strategies they believe would be suitable for use in the laboratory, including using a work breakdown structure for planning, charting the overall resource inputs required for the project, planning for risks and contingency, scheduling using Gantt Charts and project milestones, and using a costing scheme that converts resources into a common unit, e.g., U.S. dollars. Others feel more strongly that a completely new set of methods should be developed. Austin (2002) argued that the project management literature is too uniform and is not adaptive enough to be applied to science where there is “genuine discovery” that cannot be anticipated and planned for. Conventional project management strategies are better suited for construction because it is more predictable. Instead of spending a lot of time planning, research projects will require some learning-by-doing. Therefore, Austin argued, dynamic research project management methods with adaptive approaches are needed for innovative projects. This discovery paradox is a key challenge facing research project managers moving forward.

Also needed are experienced research project managers. A National Research Council report argued that Ph.D. scientists have not been trained in management, so large-scale research projects will require a research project manager who should be hired based on management skills, not scientific credentials (Nass & Stillman, 2003). These research project managers fulfill an important role in managing a growing amount of external funding for the university and their level of experience is thought to contribute to keeping projects on schedule and budget. This unique profession interweaves academic, managerial, and public service training and skills (Schuetzenmeister, 2010). It works at the boundary between science and society.

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4 For a discussion of scientific research and serendipity, see Hackett, Parker, Conz, Rhoten, and Parker (2006).
managing and negotiating with multiple stakeholders both in and outside of the academy (ibid.).

However, the research management profession is still forming its professional identity, struggling to delineate itself from university administration (ibid.). It is also working to prove that it possesses legitimate expertise and a credible identity in laboratories that have traditionally seen themselves as self-governing. There is a stigma that managing science is not as good as doing science, and large-scale research project managers must work to develop an interactional form of expertise even though they are often not trained in the particular field of study and are often less eminent than the scientists they are managing (Collins & Sanders, 2007). Research project managers face the following challenges in the lab: forces that pull research teams apart, anti-management (i.e., resistance to being managed), goal conflict between scientists and managers, difficulty with performance evaluation, and anti-organization because following the scientific method is viewed as providing sufficient organization (Smith & Tuttle, 1988). Further, large-scale research projects often require management across multiple disciplines and communications barriers may increase the project risk (Sapienza, 2004).

Managing Cost, Schedule, and Technical Risks in Large-Scale Research Projects

All large-scale projects entail a unique set of management challenges. These include the following: the technology involved is often not standard, the decision-making process includes multiple actors with conflicting interests, the project scope and ambition level change over time, contingency estimates are usually inadequate despite statistical forecasts, and misinformation about costs and benefits is the norm (Flyvbjerg, 2005). These factors may result in cost overruns and performance shortfalls in a majority of projects (ibid.). Project management is geared toward increasing planning to reduce project uncertainty and risk. Project risk is a function of complexity, innovativeness, project definition, management experience, regulatory environment, budget certainty, and error (Cash, McFarlan, & McKenney, 1992; Merrrow, 1988; Myers et al., 1986; Weil, 1992).

Schedule Slip. Changing project scope and poor project definition are key contributors to schedule slippage. Defining the project includes mapping out the project tasks, task relationships, project environment, and outcomes. Poor project definition has been shown to be a key contributing factor to cost and schedule overruns (Myers et al., 1986). Myers et al. (1986) also found that slippage in the project’s total startup time could be explained by the number of process steps that were not commercially proven and by dispersed project responsibility. It is also widely acknowledged in the literature that project scope change is a major contributor to risk and uncertainty and drives schedule slippage. For instance, Samid (1994) found that one of the biggest challenges in R&D projects is that there are so many late-planned changes that the project bears little resemblance to the original plan (a reflection of the discovery paradox).
**Managing Cost Uncertainty and Overruns.** Cost growth, or cost escalation, is the difference between the estimated cost and the actual cost of the project (Merrow, 1988). In large-scale projects, technical goals usually take priority over time and cost goals (Grun, 2004). Therefore, cost growth in large government-funded construction and infrastructure projects has been a major focus in the PM literature. Unsurprisingly, cost escalation is identified as a major problem in these larger projects, with overruns of 50–100% being common (Skamris & Flyvbjerg, 1997). It seems that cost overruns are determined early in a project’s lifespan; Christensen (1993) found that defense contracts are highly unlikely to recover from cost overruns incurred in the first 15% of the project.

Cost overruns are also often blamed on mis-estimation. In one study of infrastructure projects, underestimation was found to occur in nine out of ten cases (Flyvbjerg, Bruzelius, & Rothengatter, 2003). Priemus et al. (2008) analyzed cost estimates in megaprojects and found that they have not improved in the past 70 years, and Ramachandran (1989) found that while cost-estimating methodology has become much more sophisticated, the level of accuracy has not improved. There is disagreement in the literature about the reasons for mis-estimation. Sometimes it is attributed to appraisal optimism. Samid (1994) found that in construction projects contingency is often just used to pad cost estimates, rather than being thoroughly analyzed. Bruzelius et al. (2002) found that in megaprojects of $1 billion or more, the difference between the cost forecast and actual costs could not be attributed to inability to predict the future alone. They concluded that project proponents are intentionally biasing the forecasts, leading to poor decision-making by policymakers who are unable to rigorously evaluate the costs and benefits of a project because of these biased forecasts. They assert that technical error is actually a minor part of the cost overrun. Flyvbjerg (2007) recommended subjecting project forecasts for publicly funded projects to rigorous peer review.

**R&D and Risk.** One of the main risk factors addressed in the literature is technological complexity, also referred to as the level of innovation in the project or the use of ‘unproven technologies’ (Parker, Benson, & Trainor, 1988; Sadeh, Dvir, & Shenhard, 2000; Shenhard & Dvir, 1996). The level of technological innovation in the project contributes to uncertainty and can result in cost escalation (Melamed, Skokan, Zenkowich, & Kocher, 2008; Merrow, 1988). The three measures of the level of innovation are whether 1) the project used a first-of-a-kind technology, 2) it employed new materials or methods, and 3) it was the largest project of its kind when it was constructed.

R&D brings with it uncertainty that is difficult to quantify. Pinto and Covin (1989) drew distinctions between R&D projects and construction projects due in part to overt risk. Rigorous, yet flexible, techniques are needed (Samid, 1994). Previous knowledge is required for effective statistical analysis, yet in R&D projects the assumption that previous knowledge can be used to predict outcomes often fails (ibid.). Austin (2002) argued that risk management for highly uncertain R&D projects might need to be different from the risk and uncertainty methodology that has been well developed in the construction industry. In a survey about the usefulness
of risk management strategies, Galway (2004) found that construction managers are wedded to risk management, but high technology practitioners are ambivalent toward it.

Large-Scale University Research Project Management Survey Results

Methodology. We developed a sample of recently completed or nearly complete research projects over $50 million in which a U.S. university was the primary leader. Our sample size was 58, which we believe is the total population minus U.S. Department of Defense (DoD) projects. We faced several challenges developing this sample. First, there was little freely available information on the number and manager of large-scale research projects funded in the United States. Second, grant money was often distributed over multiple years or even through multiple grants and thus difficult to aggregate. We obtained project lists from the NIH, Centers for Disease Control (CDC), NSF, DOE, and NASA. Only NSF hosts a publicly available online database that may be searched by project cost. NASA and DOE staff provided us with information from internal databases. DOE maintains an online research and development database, but it is not searchable by cost. The NIH hosts a publicly available database with grant information, but it also cannot be searched by project cost. NIH and CDC required us to submit Freedom of Information Act (FOIA) requests in order to obtain the data. We were unable to obtain data from the DoD; the DoD officials we contacted were unaware of any DoD-funded university-run projects over $50 million. We also contacted the sponsored projects office at major universities, but most were unable to provide us with a list of their large-scale projects.

We designed a 28-page survey instrument that addressed the characteristics of the project, information about the project manager and project team, whether the project experienced cost overruns or schedule slip, what factors contributed to a successful project, the management and planning techniques used, and demographics. We asked the respondents to report on their initial cost and schedule estimates and their final cost and schedule outcomes to correlate these outcomes with a variety of risk factors. The development of the questions was theory-driven, drawing on factors in the literature thought to contribute to project success.

The survey was administered to project managers online through SurveyMonkey. If the project did not have an RPM or the RPM could not be reached, the survey was sent to the project’s Principal Investigator. We sent an alert letter to both the university’s office of research and to the head of the project prior to sending the survey invitation. We also sent multiple email requests and made follow-up calls aimed at boosting the response rate.

Characteristics of the Project Sample. Our development of the sample offers a unique overview of the characteristics of university-run large-scale research projects. The median university total project cost expenditure for the sample was $93,586,025. The average timescale for these projects was roughly seven years
The federal government is the main funder of projects of this magnitude. There was no systematic method for searching for state-funded projects, and only one was uncovered through internet and database searches. The sample consisted of three CDC projects, 11 DOE projects, 24 NASA projects, 15 NIH projects, six NSF projects, and one Ohio Department of Transportation project (see Figure 120.7-1).

Even though NIH is the largest overall government funder of university research (AAAS, 2012), it does not fund the greatest number of large-scale university-run projects. This is because much of NIH’s research funding is dispersed across universities and is not project-based. For instance, much of NIH’s expenditures are spent on basic research that is expected to one day translate into societal outcomes. NASA is the biggest funder of university-run large-scale research projects. Government funding for large-scale research projects consists of large NASA space contracts, complex large-scale scientific instrumentation and research using this instrumentation funded by DOE and NSF, and longitudinal clinical trials and other project-based biomedical research funded by NIH.

Four universities stand out as leaders in winning large-scale project contracts: California Institute of Technology (six projects plus one in partnership with Colorado State University, one in partnership with Hampton University, two in partnership with the Southwest Research Institute, and two in partnership with the University of California, Los Angeles), MIT (three projects), Stanford University (five projects), and the University of California, Berkeley (three projects).

As illustrated by Crow and Bozeman (2001), national laboratories provide leverage for universities to win large-scale projects. For example, Caltech’s leadership may be attributed to its close partnership with JPL and its history of leadership in space projects. Many of the universities in the sample have partnerships with national laboratories, including Fermi National Laboratory (University of Chicago), Princeton Plasma Physics Laboratory (Princeton University), Jet Propulsion Laboratory (JPL) (California Institute of Technology), and Lawrence Berkeley National Laboratory (University of California, Berkeley). Further, NASA provides an experienced project manager through one of its labs—e.g., NASA JPL, NASA Goddard, or NASA Langley—for all projects on which the university is the Principal Investigator. In other cases, a novel university hybrid organization managed the projects. For example, the construction of the High-Performance Airborne Platform for Environmental Research (HIAPER) was managed by a university research consortium, the University Corporation for Atmospheric Research. The project took five-years and

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5 Project duration data and total university expenditures were available for 48 of 58 projects. The data gaps for cost were for NASA projects; the agency told us that the university contract was above $50 million for the list of projects they provided, but they did not provide us with the exact amount. We were unable to locate this information in the public domain for 10 projects. If data were available for the missing 10 projects, it would likely increase the median cost because NASA total project costs were generally higher. Note that cost expenditure and project duration data, where available, were provided by agency databases, except for NASA. NASA cost/duration data were obtained from govbudgets.com NASA edition or from project websites.
Figure 120.7-1: Funding Agencies for Large-Scale University-Run Projects Based on the Number of Recently Completed or Almost Completed Projects (through 2010)

- DOE 18%
- NASA 39%
- NIH 11%
- NSF 25%
- O'H Dept. of Transport 2%
- CDC 5%

Note that this describes the survey sample, not survey respondents.

was completed in 2006 for a total project cost of $80 million. It was funded by NSF.

These projects were diverse, including construction of complex scientific instrumentation, construction of first-of-a-kind spacecraft, fundamental research, and clinical trials (see Figure 120.7-2). Twenty-four of the projects involved first-of-a-kind space missions. For example, Deep Impact was a mission to impact and take samples of a comet. It was headed by University of Maryland (providing the Principal Investigator and scientific team) with the JPL (providing the project management) and Ball Aerospace & Technologies Corporation (providing the flight hardware). The construction and mission took six years at a total project cost of $330 million, $66 million of which went to the university. In another example, the NASA Wide-Field Infrared Survey Explorer (WISE) mission mapped the sky at four different infrared wavelengths with greater sensitivity than past maps. It was a $320 million mission in total project costs—with $220 million going to Caltech—over 11 years. The Principal Investigator was provided through the University of California, Los Angeles; NASA's JPL provided the project manager.

The NIH-funded biomedical projects ranged from clinical trials to genetic sequencing. One example is the $156 million Health and Retirement Study by the University of Michigan—a longitudinal in-depth interview study of senior citizens living in the United States. The researchers are interviewing 22,000 Americans over age 50 every two years. Another example is the sequence of the yeast genome by Stanford University at a total project cost of $97.5 million. A third is the BARI II trial.
at the University of Pittsburgh, which was a multi-country clinical trial on type II diabetes and coronary artery disease funded at a total project cost of $55 million.

NSF and DOE funded a number of complex scientific instrumentation construction projects. For example, the Ice Cube project, run by the University of Wisconsin-Madison and funded by NSF, entailed the construction of a deep ice neutrino detector at the South Pole. The project required drilling 86 holes and installing 5,160 sensors for a total expenditure of $200 million. Another example is the Earthscope project funded by NSF and managed by Stanford University. It consists of 400 portable seismometers covering the entire United States, global positioning instruments positioned to observe fault zones in North America, and strainmeter instruments for observing and studying plate boundary processes and volcanic events. Other projects in the sample were large-scale research projects conducted on recently constructed complex scientific instrumentation such as the Alcator C-Mod Fusion Research Program funded by the DOE, the National Compact Stellarator Experiment, and the Stanford Linear Collider Research and Development.

**Survey Results.** We received 18 partial responses and 12 complete responses from a sample of 58. Unfortunately, this was not a high enough response rate for statistical significance, but we were able to make some observations, outlined below. The dependent variable was project success, defined by whether the project met technical performance, cost, and schedule goals. Independent variables included key factors that the literature suggested would drive cost and schedule overruns,

![Figure 120.7-2: Type of Project Based on the Number of Recently Completed or Almost Completed Projects (through 2010)](image)

As categorized by the authors.
such as years of experience of the project manager; adequacy of project planning, particularly cost and risk estimation methods; changes in the scope of the project; inadequate project definition; sufficiency of the cost estimate; and interdisciplinary communication barriers.

Project success, defined as meeting technical performance, schedule, and cost goals, was mixed. The response rate for the cost and schedule slippage questions was low. Only project managers who met their technical performance goals responded to these questions, biasing the results toward successful projects. The response rate for the project cost estimate and actual expenditure was particularly low (n=5), perhaps due to the sensitivity of the question. Only one project manager reported meeting the project budget, while two experienced moderate overruns (5–10% of the estimate) and one experienced a significant overrun (15% of the estimate, or $15 million). Forty-two percent of projects came in on time or ahead, 29% were somewhat behind (i.e., 25–50% over schedule), and 29% were very behind (i.e., 25–50% over schedule) (n=8). Therefore, while all of the projects delivered on their technical promises, many did so well over schedule. Figure 120.7-3 outlines project success, which we defined based upon the significance of the cost overrun, the significance of the schedule overrun, and whether technical performance goals were met. Sixty-seven percent of projects were somewhat successful, 11% were successful, and 22% were very successful.6 Surprisingly, only half of the projects (n=18) conducted a project risk assessment in the planning phases, suggesting planning for risk and contingency was insufficient.

Based on findings from the literature, the project manager’s experience level was expected to affect project success. The majority of all managers who responded were highly experienced, with about 85% having five or more years of experience on projects over $50 million. Sixty-four percent had master’s degrees in science, technology, or medicine, and 22% had Ph.D.s. (see Figure 120.7-4). Additionally, 61% had training in the scientific sub-discipline related to the project. In 77.8% of cases, project managers reported that the experience of the project staff was also critical to meeting technical performance goals.

Fifty-seven percent of the projects experienced turnover in the lead project manager during the project. While we expected to find that turnover in the lead project manager negatively affected the project, two managers stated that the change was positive because the initial project manager was either inexperienced in large-scale project management or was inexperienced in the scientific domain. Several others stated that there was a negative impact at the time of the change, but overall the change turned out to be positive, or even very positive, because they gained a more experienced manager.

The project managers’ qualitative responses revealed challenges with anti-management and university-specific management techniques, reinforcing the findings from the literature on research management outlined above. One of the project managers reported that many of the PM techniques NASA suggested they use were irrelevant to a university setting. Another pointed out that university clocks oper-

6 These data were only available for nine projects.
ate on different schedules than those of the aerospace contractors. Several managers reported that ‘managing by walking around and speaking informally with people’ was the most important technique. S/he stated, “people working on the mission need to know that you know them and that their contribution is important.” In summary, project communication is important to success.

Five shared frank comments about their experiences with anti-management, with one stating:

... many of the individuals assigned to work on the project were unfamiliar with, and resistant to, the implementation of formal project management processes. This resistance often led to a hesitance (and in some cases a refusal) to work with me and others on the project team to perform appropriate cost, schedule, and status reporting.

This finding reinforces the findings from the literature that research project managers face significant anti-management challenges and adds to it the possibility that these challenges may lead to cost and schedule overruns. One RPM reported significant staff turnover in the project due to anti-management.

Other RPMs reported struggling with scientists who believed management and science were mutually contradictory, with one stating that:

Some scientists within the organization firmly believed that management of the project was contrary to scientific discovery; that managing to a budget, schedule, and scope were ‘anti-science.’
This experience reflects the scientific discovery paradox.

**Discussion And Conclusions**

These preliminary findings suggest that there is much more to be learned about managing university projects. Research managers will continue to face challenges with anti-management, the discovery paradox, and university design. Developing project management methods that are tailored to the university setting and to risk factors specific to large-scale research projects is necessary for moving universities toward even greater success in completing research projects on time and on budget.

We discovered throughout the research process that federal agencies and universities lack data and data transparency about their large-scale projects. This makes it difficult to systematically develop a profile of the large-scale university-run research funded by the U.S. government. It also suggests a lack of coordination in this research profile. Additionally, most major research universities were unable to provide us with data, with one sponsored projects office lamenting that such data were very difficult to collect in their decentralized institution. The NSF has taken an excellent first step with its online database of projects searchable by cost. Other agencies may consider developing such databases, adding cost parameters to their existing databases, or making data available through databases like data.gov.

While rigorous project evaluation may improve future project success rates, it is difficult to execute. Barriers to effective project evaluation include: difficulty tracking evolving projects; concern over disclosure of proprietary information; and a
lack of incentive for managers to participate, particularly if the project was unsuccessful (Galway, 2004). While the key objective of our survey was to determine the significance of cost and schedule overruns in these projects, the response rate in that section of the survey was particularly low. Further, several project managers reported to us that they were not allowed to participate in such a survey. The length of the survey also contributed to the low response rate, particularly since there are few incentives for extremely busy managers to devote time to program evaluation. The research management profession and funders should consider counteracting these barriers, perhaps with incentives offered for participating in program evaluation. As management methodologies improve, research project managers will likely benefit from focusing on and improving project definition and structuring projects to reduce their complexity. Conducting a project risk assessment at the initiation of the project is also likely to aid in success. Universities may also consider opening a project management office to aid in winning these projects and successfully managing them.

About the Authors

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Submission of a $20 Million Proposal
David Smelser, The University of Tennessee–Knoxville

Recently there has been a shift in sponsored research towards interdisciplinary programs emphasizing collaborative research efforts. Bringing researchers from a variety of disciplines together to examine an issue is the academic equivalent of moving away from the “great minds think alike” mentality towards a “two heads are better than one” approach. Sponsors are dedicating enormous sums of money to these types of cross-cutting programs, often specifically for the formations of new centers, and in turn are soliciting proposals that require a tremendous amount of effort to prepare. As someone who has conducted research of my own, I appreciate the new emphasis on collaborative research and welcome the contributions that will be made to science as a result. As a university employee, I also welcome the countless benefits to the institutions involved with these projects, such as millions of dollars in funding, more faculty lines, higher quality graduate students and postdoctoral researchers, and maybe even a little fame.

Over the past year, I have had the opportunity to work with faculty to submit both a Science and Technology Center (STC) proposal and Engineering Research Center (ERC) proposal to the National Science Foundation (NSF). The STC and ERC programs issue some of the largest awards made by NSF annually. These awards are very prestigious, extremely competitive and worth a lot of money ($43.5 million combined). Consequently, the proposals to these programs are quite complex and require both great attention to detail and a significant amount of time to prepare.

To give you an idea of the complexity of these proposals, our STC proposal had 33 researchers identified by name, 16 subcontractors and four other affiliated institutions, 19 postdoctoral researchers, 14 new graduate students, 10 technicians and a 96-page budget to explain the $25 million request. The ERC proposal had 99 letters of commitment from private industry partners, state government, pre-college schools, national laboratories and affiliated and partner universities, as well as 37 researchers identified from six countries. I was very fortunate because I was able to work with the faculty for about four months on each of these proposals – and trust me, I needed every minute.

While researchers and institutions gain so much from these awards, the question must be asked, what does preparing mega-proposals mean to research administrators, especially to those of us working in pre-award services? Does it mean longer hours, an extra cup of coffee each day and a bottle of Excedrin in your desk drawer? It could, but it does not have to. As it turns out, submitting a mega-proposal can be pretty easy. After preparing these mega-proposals, I have learned some valuable lessons, which can be used not only on the largest of proposals, but also in our day-to-day work as well.

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“Stay Organized, Stay Stress-Free”

1. **Take Pride in Your Contribution:** We all work in research administration, so we are fully aware that we will not be the one with our picture on the cover of the university newspaper when the proposal gets funded. But that should not stop us from being proud of the role we play. It is very important to keep in mind that the science in all of these mega-proposals will be rock solid, so it is the little things that can determine whether or not the proposal will be funded. Catching a minor oversight by the PI could make a major difference to the review panel. When working on these proposals I always tell my PIs, “you do what you do best, and let me do what I do best.” Never forget that you are an expert in your field, just as they are in theirs, so take pride in your contribution to the proposal.

2. **Get to Know Your Counterparts:** When was the last time you received a proposal that was due at the last minute? If your answer is “earlier this week,” you are in the same boat as the rest of us. This is why it is vital to touch base with your fellow research administrators at collaborating institutions early in the process. We all welcome the chance to get ahead of the game and not get stuck with a million-dollar subcontract with 20% mandatory cost-share that is due in two days. Also, when working on proposals, it is inevitable that something will change at the very end. By establishing a relationship with your colleagues at other institutions, you will have an ally in your corner. With a few days left until the deadline, having confidence that your new friend will come through for you provides great peace of mind.

3. **Understand Your Time Frame:** All too frequently, researchers are four months away from a deadline and feel they have all the time in the world, but we all know that is not true. It is very important that we, as research administrators, discuss time constraints and the realities of proposal preparation with the PIs we will be working with. Those of us in research administration have seen nearly every road bump imaginable, and it is important for the PIs to understand how long the process really takes and the common things that tend to cause delays. When working on a mega-proposal, it is beneficial to create a timeline that includes milestones for different points in the proposal process. Also, having regular “status check” meetings tend to keep the proposal on track. When PIs have to show up at a meeting and report on their progress, they often feel more accountable for completing the tasks they have been assigned. Do not be surprised if the PI is hesitant to accept a timeline at first, but they will thank you for it in the end.

4. **Invest Some Time Up Front:** It is also important to know what the research team is trying to do. No, I do not mean becoming an astrophysicist or expert in smart grid technology overnight, but it is good to understand the overall theme of the proposal. Does the proposal primarily consist of research activities, or is it focused on educational outreach? The central theme of a proposal can have a dramatic effect on the types of documentation you need to obtain, how the budget should be prepared and which institutional officials should be involved. Understanding what the PI is proposing will allow you to organize better and
save yourself some valuable time in the days before submission.

5. **Gather Static Documents Early:** How long does it take to get a CV, in the proper format, from a PI? I can see the grin on your face. How can such a trivial thing possibly be so difficult? Documents such as a researcher’s CV, Current & Pending support, or the institution’s Facilities & Equipment form generally do not change very often and can be gathered very early in the proposal preparation. While preparing our STC and ERC proposals, even after weeks of requesting and reminding, some individuals did not submit their CVs until the week the proposal was due. Can you imagine how hectic life would have been if I had not started gathering them early? Beyond helping yourself, collecting these documents early will make the PI’s life easier as well, because as the deadline approaches, they want to concentrate on their science and not on formatting their CVs. Gathering the static documents before the researchers are stressed out will certainly make your job much easier.

**“Sitting Behind the PIs Desk”**

Working on our STC and ERC proposals gave me the unique opportunity to see what proposal development is like from the other side of the fence. Many people who work in research administration never get the chance to see a proposal come to life, from the original idea all the way through the proposal development process. We generally only see a proposal a few days before the deadline and do not tend to examine the efforts required to get the proposal to our desk. By working with these PIs for several months, I gained a new perspective on how they felt during different stages in the process and have begun to better understand their mindset. It might be hard to believe, but they do not try to make our lives difficult; they just see things in a different way. I truly believe that in the field of research administration, we can all become more effective if we take the time to understand the PI’s point of view.

**Under enormous pressure:** In the final days before submission, the PIs are focused entirely on their work. For most PIs, having a proposal funded could be the difference between gaining tenure and losing their job. In the case of the mega-proposal, this may be a career-defining moment: the culmination of years of dedicated work. Either way, PIs feel an enormous amount of pressure during proposal development. While this proposal might be just one in a giant stack for you, submitting a proposal is not just another day at the office for the PI.

**PIs are people, too:** PIs do not get release time to write their proposals. They still have to teach classes, grade student papers, publish articles, manage their labs, mentor post-doctoral researchers and graduate students and even to squeeze a personal life in there somewhere. While research administrators are not “clock punchers,” researchers, especially those ambitious enough to apply for sponsored funding, are doing so on their personal time. Often we see PIs as robots, but they are people, too.

**Their mindset:** PIs are researchers, not research administrators, therefore they do not have the same level of understanding of administrative issues that we do. Their job is to conduct world-class research, educate future generations and bring
in research funding, not necessarily to understand every policy and regulation of every sponsor. We see proposals day-in and day-out while most PIs usually do not work on them more than once or twice a year. An example of an administrative issue that PIs frequently do not realize is that proposals consist of much more than the page limit of the project narrative. PIs tend to focus on their research, which is completely understandable because that is their expertise and comfort zone. But we know that there is more that goes into submitting any proposal than just the project narrative. The STC and ERC proposals I worked on were about 88% documents that went beyond the project narrative. We should always keep in mind that a PI’s skill set is different from our own. If we take the time to recognize and understand that PIs have a different outlook on sponsored research, we can help them understand all of the additional details that they are not aware of, do not understand or just do not want to worry about.

By keeping the proposal organized, encouraging the PI to stay on track, staying cool under pressure, understanding the PI’s mindset and, most importantly, taking pride in your role in the proposal process, submitting any proposal, even a mega-proposal, can be easy!

About the Author

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Where Do I Send this Check – The Gift or Grant Office?

Bruce Morgan, University of California, Irvine; and Anthony (Tony) F. Ventimiglia, Auburn University

While the goal of increasing extramural funding for our institutions has become more imperative in recent years, achieving consensus on how this funding is classified and processed within an institution sometimes is more challenging than completing a Rubik’s Cube. However, many institutions have been working diligently toward bridging the gap between Sponsored Programs Offices and offices of advancement/corporate and foundation relations and building or repairing relationships through collaborative efforts. Before discussing the advances made in this regard, it is important to understand some of the underlying issues and challenges. With that in mind, please note that the intent of this article is not to examine the IRS definition of “charitable contribution”, but rather to discuss the institutional landscape in which extramural funding classifications are made. As the authors, it is our position that it is up to each institution to determine whether its extramural funding classification policies and procedures account for or consider the IRS definition of a “charitable contribution”. Likewise, it is not our intent to advocate for, or against, an institution’s role in advising a donor/sponsor whether the funds they are providing constitute a “charitable contribution” as defined by the IRS.

Gifts v. Grants: Exchange and Non-exchange Transactions

Appropriate classification of funding is important to institutions; it determines how to account for the funds, recover costs, monitor activities, and report on the use of the funds to internal and external constituents. Most institutions classify extramural funding as non-exchange transactions (i.e., gifts) or exchange transactions (e.g., grants, contracts, cooperative agreements, sales and service agreements, etc.). For public institutions, the appropriate classification of funding takes on additional importance as they are charged with the stewardship of public assets and misclassification of funding may lead to the misuse, mismanagement or abuse of the assets entrusted to them.

In non-exchange transactions, the intent of the giving party (donor) is to make a charitable contribution (typically cash, cash equivalents or property). The donor neither receives nor expects to receive anything of material value in return for the contribution. Typically the donor seeks only to ensure that the disposition of the gift is carried out in accordance with their wishes and that the gift is appropriately recognized. Such transactions are generally processed by an institution’s advancement/corporate and foundation relations unit. In contrast, an exchange transaction is one in which the sponsor receives something of material value in return for giving something that the parties perceive to be of equitable value – a quid pro quo arrangement. These reciprocal transactions usually take the form of a contract, agreement, grant, or letter of understanding and breaching the agreement usually...

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triggers consequences for the breaching party. Exchange transactions are generally handled and processed by an institution’s Sponsored Programs Office.

A critical aspect of the extramural funding classification process is conducting an analysis that examines the intent of the party providing the funding. The intent of donors in the context of non-exchange transactions is characterized as charitable and philanthropic in nature. During the analysis, the intent of the donor should receive significantly more consideration than the label used by the donor and others to describe the transaction. A donor may provide a gift, but call it a “grant”. This designation alone is not sufficient to classify and process the funding as an exchange transaction.

It is not unusual for donors to provide “grants.” Likewise, it is not unusual for an institution to determine that such funding is most appropriately accepted as a gift, as defined by the institution in its policies, and administered by its advancement/corporate and foundation relations unit. Consider the example of a company that provides a grant to support student scholarships where the company wants the scholarships to carry its name (e.g., VentMor, Inc. Scholars), as well as receive a report highlighting the scholarship recipients and the amount of each scholarship. Such an arrangement does not convey something of significant value to the donor; thus, a quid pro quo does not exist. In this example, the institution’s advancement/corporate and foundation relations unit would normally process the funding as a gift.

While the intent of the party providing the funding is very important, it is not the only factor and institutions should ask additional questions during classification analysis, such as:

◆ Does the funding support an activity or project with a defined period of performance?
◆ Does the donor/sponsor reserve the right to revoke the funding at its own discretion?
◆ Will the donor/sponsor acquire patent and/or other intellectual property (IP) rights?
◆ Does the donor/sponsor require the return of unexpended funds?
◆ Does the donor/sponsor reserve the right to conduct a detailed audit of the program or activity?
◆ Are detailed financial reports and/or detailed programmatic progress reports required by the donor/sponsor?
◆ Does the activity involve the testing, analysis or use of the donor/sponsor’s proprietary information, materials, or products?
◆ Does the donor/sponsor have material transfer agreements or IP exchange agreements in place with the institution where the materials or IP will be used in the performance of the activity or project?

The above questions are not all inclusive – each transaction is different and careful judgment should be exercised during the classification analysis. It is criti-
cally important to consider all factors prior to making a classification decision. For example, consider the situation where a non-profit foundation provides a gift to an institution accompanied by the following requirements:

- The funding may only be used for the purpose of advancing the institution’s nanotechnology research programs;
- The institution must provide annual reports of how the funds are utilized;
- The institution is required to return all or part of the funds if it loses its tax-exempt status under Section 501(c)(3) of the IRS Code;

In light of these requirements, and without careful analysis, this funding may appear to be an exchange transaction. However, when one considers that the foundation’s mission is to advance nano-science and the public’s understanding of it, the requirement to use the funding only to advance the institution’s nanotechnology research programs is a reasonable and necessary requirement. Likewise, the annual report requirement is necessary to enable the foundation to fulfill its mission-based obligation of increasing the general public’s understanding of nano-science. Most institutions consider such reports to be an appropriate stewardship activity, especially when the reports are written at a summary level and lack the detail usually found in the progress and financial reports associated with exchange transactions. Regarding the requirement to return funds if the institution’s tax-exempt status is lost, the foundation is also tax-exempt under Section 501(c)(3) of the IRS Code and as such it operates exclusively for exempt purposes as defined by that Section. Therefore, if the institution lost its tax-exemption prior to expending all of the foundation’s funds, the foundation’s tax-exempt status could be at risk.

**Who Cares? – Motivations for Classification and the Differing Perspectives of Key Players**

Understanding the motivations, perspectives, and the roles and responsibilities of key players in extramural funding classification and processing is key to fostering collaboration amongst these players. These key players will differ between institutions, but in general they include:

- The advancement and/or corporate and foundation relations unit
- Development Officers
- The Sponsored Programs Office
- Researchers/program directors
- Donors/sponsors

Other individuals and/or institutional organizations may be involved in the processing of extramural funding and may have their own motivations for having funding classified as an exchange or non-exchange transaction. However, those listed above are key stakeholders within the classification process at most institutions. As such, they may have the opportunity and/or political capital to influence the classification decisions.

An institution’s advancement/corporate and foundation relations unit tends
to have an external focus aimed at establishing, nurturing and expanding broad relationships on the institution’s behalf with individual and family donors, alumni, corporations, charities, and foundations. They foster these relationships over time and typically with extensive efforts, which result in contributions and donations to support the furtherance of an institution’s mission. Donor stewardship and recognition efforts are part of this unit’s activities. Such activities are essential to the continued development and nurturing of institution/donor relations.

At some institutions, Development Officers (usually employees of the advancement/corporate and foundation relations unit) are embedded in schools, academic departments and research centers. These individuals are responsible for the fundraising activities of the units to which they are attached, and they work closely with faculty researchers. Often they report to both the head of the academic/research unit and the advancement/corporate and foundation relations unit. These individuals are often compensated and evaluated based on several performance factors, including how much money they raise for the academic/research unit. Therefore, they have a strong motivation to ensure that such funding is classified as a gift so that they may receive credit for it.

Sponsored Programs Offices (SPO) tend to focus on internal constituents (primarily faculty/researchers) to prepare and submit proposals to federal, state, corporate, and private entities (for-profit and non-profit), in addition to other responsibilities related to compliance and award management. SPOs interact with sponsors on exchange transactions regularly. As a result, if a proposal submitted to a non-profit through an institution’s SPO is funded, the resulting award may be processed as a grant or other exchange transaction purely out of habit or routine.

Researchers and program directors/managers also play a critical role in non-exchange and exchange transactions. They are responsible for ensuring that their programs have sufficient funds to continue their planned activities. The competition for funding can be, and often is, very fierce. Researchers and program directors/managers generally strive to maximize the funding for their programs. Sometimes, the interests of these individuals and their programs conflict with the interests of the institution. For example, a researcher might verbally agree to conduct a specific scope of work and provide the sponsor with exclusive access to research results in exchange for the sponsor’s “gift” to the researcher’s lab. A common motivation for such an arrangement is the avoidance of facilities and administrative (F&A) costs. The researcher may not understand that such costs are essential for supporting the institution’s research enterprise and may consider such costs to be a tax or penalty that should be avoided whenever possible.

Of course, donors and sponsors play a key role as well – without them, there would be much less funding available for our institutions’ research programs. While they are motivated to provide funding to our institutions for reasons that span a broad spectrum, they do not have unlimited resources to support their funding programs. Consequently, they often seek to leverage their funding to the greatest extent possible. For example, a startup company without its own research facilities may have a verbal understanding with a researcher related to a “gift” pro-
vided in exchange for services that directly benefit the company and advances their research interests or moves their product closer to market. In such a situation, the company is usually motivated by a desire to minimize costs while maximizing the value received for their funding. Disguising an exchange transaction as a gift avoids the additional charge of institutional F&A costs.

**Effective Extramural Funding Classification – Three Proven Models**

The organizational model for extramural funding classification varies across institutions. Successful models have at least one thing in common – open and collegial communication and collaboration between most or all of the individuals involved in the classification process. Collectively, we have worked at institutions where all three models described below have been successfully used.

**The Team Model**

In this model, the SPO and advancement/corporate and foundation relations offices work together as a team, often times in conjunction with other offices and individuals. This is the model currently in place at Auburn University where the offices of Sponsored Programs, Contracts and Grants Accounting, Corporate and Foundation Relations, Development Accounting and Vice President for Business and Finance meet on a monthly basis.

The team’s goals are to: foster a collaborative environment; increase extramural funding; create common definitions and understandings for gifts, grants, contracts and exchange transactions; create a common understanding for soliciting, administering, and counting extramural funding; create common definitions and understanding of the role of each office; and ensure compliance with all applicable policies, guidelines and procedures. Some of the outcomes of this collaboration have included the development of a new policy and associated checklist, discussions on specific solicitations (wherein the team will review a proposal request and/or award documents to determine the appropriate treatment), joint presentations across campus (representing a united front), as well as open more lines of communication between the offices (including the inclusion of Corporate and Foundation Relations in the dissemination of Sponsored Programs bi-monthly Funding Opportunities Newsletter). Even though there are still challenges and issues to face, this model enables the team to work closely and collegially to address them.

**The Committee Model**

This model is similar to the Team Model, but is more formal in its structure, authority and procedures. The committee is usually constituted and charged by a senior level institutional official, such as a Provost or Executive Vice Chancellor. The membership of the committee is defined in policy, as is the committee’s scope of authority. Membership often consists of one or two knowledgeable representatives from the Sponsored Programs Office, the University Advancement Office (which typically includes the Foundation Relations and Corporate Relations offices) and the Accounting/Financial Services Office. In some implementations of this model, additional representatives are added from units such as the Budget Office, Purchasing/
Business Contracts and Risk Management. The committee is usually charged with conducting reviews and making decisions for the institution regarding the classification of extramural funding. The goals and activities of the committee are typically very similar to those described in the Team Model above.

*The Flexible Model*

Unlike the other two models, which bring key offices and individuals together on a regularly scheduled basis, this model functions in a less formal way and relies on ad hoc groupings to address issues related to extramural funding classification, as well as the goals and activities discussed above in the Team Model. This is the model currently in place at the University of California, Irvine (UCI).

In this model, policy typically vests the responsibility for reviewing extramural funding and making classification decisions in one individual or an office (institutional reviewer). When questions arise regarding the appropriate classification of funding, the institutional reviewer coordinates with a variety of key constituents from across the institution based on the nature of and circumstances surrounding the funding. The Flexible Model helps secure additional information from researchers and/or program directors/managers by engaging them in discussions regarding the purpose of the funding and the intent of the sponsor/donor. Their involvement in the classification process opens up lines of communication that are necessary to ensure that all of the facts and information available are considered prior to making a classification decision. Involving them in the process also creates opportunities to educate and orient them on the importance of appropriate extramural funds classification.

*Summary*

Classification analysis is critical to ensuring the proper handling of extramural funding and the methods to achieve this will vary across institutions. However, equally important is that the stakeholders within an institution understand each other – their roles and their motives – and build an extramural funding classification process upon a foundation of collegial collaboration and open communication.

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Improving the Efficiency of the Research Award Setup Process

Mike Daniel, University of Chicago, and Rob Rubens, Huron Consulting Group

The setup of a research award is a high profile, outward facing, linchpin process in the award lifecycle. There are several key stakeholders, including academic and department leadership, principal investigators (PIs), and local research administrative support, all of them cognizant of the time required to set up a research award. These various groups’ perceptions of the efficiency of the award setup process greatly affects their overall impression of the customer service level provided by central research administration offices.

The setup process often involves several personnel handoffs, from the pre and post-award functions, and can also include various compliance offices (COI, IRB, IACUC, IBC), general counsel, technology transfer, and sometimes offices outside of the research administration infrastructure, such as information technology. Each step provides an opportunity for hiccups in an award’s progression, but consequently each identifies areas to streamline. Fortunately, setup is one of the easier research administration areas to quantifiably measure and improve via metrics, as there are myriad defined checkpoints. This paper will address key roles and responsibilities surrounding award setup as well as valuable metrics to motivate staff, identify bottlenecks, and ultimately improve the efficiency and effectiveness of the overall process.

Award setup often forms the bridge between pre-award and post-award within a research administration organization. At a high level, all new awards or award modifications, once received, must be entered into the institution’s various internal systems, including the pre-award tracking and post-award financial system. Communication of award receipt and basic award requirements (reporting requirements, budgetary terms) to PIs and local administrators must also occur.

Award setup also establishes the foundation for effective future management of the award, including meeting technical and financial reporting requirements, determining allowable costs, and tracking other salient milestones. Accurately recording data points during award setup is critical to effective and compliant award monitoring, as well as efficient cash management. Many prominent research administrators have recognized the importance of award setup to the smooth operation of their organizations. An example of a recent process improvement initiative at the University of Wisconsin Madison (UW-Madison) centered on effectively employing metrics to improve the speed of award setup times: “Using data to capture processing times for key steps in the award setup process, UW-Madison was able to quantify its baseline performance and identify ways to improve the process through workflow, IT, and training enhancements. The outcome of the initiative was an overall reduction in award setup times by over 60 percent. On an ongoing basis, UW-Madison has been able to maintain fast award setup times as a direct result of monitoring goal vs. actual performance data in this area on a monthly basis.” — Kim Moreland, Assoc.

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Vice Chancellor for Research Administration, and Director, Research and Sponsored Programs, University of Wisconsin.

Initial data entry errors create the potential for a butterfly effect downstream, ultimately increasing audit risk. Many other research administration functions rely on accurate award setup including invoicing of research accounts, financial reporting, Facilities & Administration (F&A) rate negotiation, effort reporting, and institutional budgeting. Data points such as F&A rate, F&A base, and overall budget, including personnel effort, must be accurately captured.

Figure 120.10-1.

Data Points Captured:
- F&A rate
- F&A base
- Overall budget
- Personnel effort

Technical Reporting Requirements
- Milestones
- Financial Reporting Requirements
- Allowable Cost Determinations

Effective Cash Management
- Reduced Audit Risk
- Accurate Award Monitoring
- Compliant

It is important that award setup proceeds as smoothly and efficiently as possible. Take cash flow, for example. If process holdups delay establishing the award account in the institution’s financial system, the expensing of project costs and possibly reimbursement for costs already incurred are delayed. Many institutions allow investigators to utilize a “pre-award” or “advance” account for project expenses in anticipation of the official award. This holding account houses expenditures prior to the negotiation or receipt of formal award documentation. However, until the award has been received by the institution and fully set up in all applicable pre-award and post-award systems, the institution cannot bill the sponsor for research expenditures incurred. From a cash management perspective, timely conversion from a pre-award or advance account to an executed grant or contract is crucial in order to optimize cash flow at an institution.

Exact roles and responsibilities in the process can vary greatly among institutions due to differences in the sizes and structures of research administration offices as well as approaches utilized. Examples of different organizational approaches to award setup include:
- Separate personnel in both the pre-award and post-award offices, each having a unique role in the process
- Award setup as its own unit within either the pre-award or post-award office
- A cradle-to-grave approach where a single research administration unit manages the process from proposal to award, including setting up awards in all systems
One common theme found across institutions, however, is that the PI and/or the PI’s administrative support often play a key role in the process. For example, the PI may be responsible for acknowledging the terms and conditions of the award before the award is accepted by the institution and research costs incurred. While each of the above approaches is valid, coordination of tasks among the different roles in the process remains critical.

Researchers value a high level of efficiency and accuracy in award setup, as they need the ability to incur expenses as quickly as possible upon award execution. Additionally, the ability to pay research staff salaries, purchase equipment and supplies, book travel, etc. is dependent on this cycle time. Delays in award setup will result in decreased customer satisfaction, with PIs often not hesitating to communicate their dissatisfaction and frustration to university leadership. Essentially award setup is a gate-keeping step for beginning research: spending and progress can only occur as fast as awards are set up.

To further understand the importance of the award setup process, it is useful to take a look at key steps in the process in more depth, including personnel responsible for proper execution, pitfalls to avoid, and key metrics related to each phase.

Figure 120.10-2.

1. Receipt of the Award Document

Award setup begins when the award document, e.g. a fully executed contract or notice of grant award, is received by the institution. An intake staff member matches the award document to its associated proposal and records receipt of the award document in an internal tracking system. Typically, notification of award receipt is then electronically sent to the PI/department. At this point, it is imperative to begin tracking cycle times. Certain documents are time sensitive, requiring a signature and quick turnaround to the sponsor after receipt. Using the initial award receipt date as the starting data point of an award setup cycle makes sense as (i) it is the reasonable starting point from which administrative action can occur, (ii) it allows for tracking as process steps take place across various roles, and (iii) the receipt date will likely be viewed by the PI as the starting point upon which action is expected of central research administration.

Pitfalls at this phase can be avoided with the following steps:

◆ Avoid communication breakdowns: Award documents and related information sometimes may not flow between the central research administration office and departments efficiently, causing dissatisfaction for PIs and their staff.

◆ Identify and associate award documents with corresponding proposal file(s), which requires additional due diligence upon award receipt, depending on both the clarity of data on the award document as well as the strength of the
institutions’s proposal tracking system.

Two key metrics to begin tracking in this phase:

1. The receipt date of an award as the starting point for an award setup processing time metric

2. The type of award received (new, modification, subcontract) to enable a comparison of cycle times by type

2. Review and Negotiation of the Award Document

Next, staff will review the award document, identifying troublesome clauses, conducting compliance reviews, comparing the document against the corresponding proposal, negotiating with the sponsor if necessary, then accepting and entering the relevant data in the pre-award system.

Review of award documents will vary depending on complexity of the terms and conditions of the award, as well as the staff member’s familiarity with the sponsor. This research administrator holds responsibility for noting special requirements and questioning non-standard terms. If issues are identified and fall outside his or her immediate realm of expertise, the administrator should bring in additional resources within the office or elsewhere in the institution, e.g. the technology transfer, general counsel, or human resources departments, to resolve outstanding questions. Subsequently, applicable compliance checks related to conflict of interest (COI), humans subjects research (IRB), animal research (IACUC), and hazardous materials (IBC) should be completed at this stage.

It is at this point in the overall process that central research administration must verify the PI has taken comprehensive and necessary actions to gain all applicable compliance-related approvals. These compliance checks are a regulatory responsibility for the institution and comprise a critical step of the overall award setup process. If necessary, the award is then formally accepted by returning an executed contract or award document to the sponsor.

Pitfalls at this phase can be avoided with the following steps:

◆ Communicate necessary forms and procedures related to open compliance issues with the PI/department prior to award receipt, so award setup is not delayed. Award setup personnel should continue to follow up with compliance offices and the PI to ensure a smooth flow through the applicable compliance approval processes.

◆ Establish clearly defined issue escalation procedures to address problematic award terms and conditions. For example, an institution could automatically escalate award negotiations that have gone on for more than 30 days since award receipt. Any delays and causes thereof should be tracked for future process improvement.

Two key metrics to begin tracking in this phase:

1. Time to review an award document. This could be defined as total pre-award review time for those institutions with separate pre-award and post-award
offices. There is a benefit in tracking total review time for each administrative role in the process; leadership will gain a deeper understanding of the different components of overall process cycle time.

2. Number of awards put on compliance “holds,” length of compliance holds, and process time utilized in waiting for information from other offices (PI, departments, and compliance offices).

3. Award Setup in the Institution’s Financial System
At this juncture staff reviews the award’s reporting and financial requirements to determine payment schedule and disbursement method, e.g. letter of credit, invoicing, or fixed payments. In addition, it may be the case that the sponsor has awarded a reduced budget versus what was originally proposed. If this occurs many institutions will require the PI to provide an updated budget to reflect the awarded amount before proceeding with award setup. Some institutions will only require an updated budget if the reduction crosses a certain threshold, such as 20% of the total proposed budget. Using clearly communicated budget reduction threshold will send a clear signal to campus when a revised budget will be required.

Special reporting requirements should also be identified and noted, e.g. FFATA, cost sharing, and the frequency of sponsor financial reporting. The administrator should then establish this information in the institution’s financial system as well as any additional “shadow” system being utilized to track award data. This step establishes the research account and creates the unique account number.

Pitfalls at this phase can be avoided with the following steps:

◆ Communicate the need to revise the project budget either internally (PI/Department) or externally (consultants/subrecipients) without delay.

◆ Ensure all award information is consistently and accurately transferred to post-award from pre-award.

◆ Completely capture award attributes in the financial post-award system; downstream financial processes and reporting can be affected.

Four key metrics to begin tracking in this phase:
1. Total number of award setups over a specified period of time, e.g. annually, quarterly, etc.

2. Cycle time from end of pre-award setup to end of post-award setup

3. Administrative award setup cycle time, or time from award receipt to completion of post-award setup

4. Cycle time to set up new awards vs. award modifications as well as various types of awards, e.g. contract vs. grants, federal grants vs. nonfederal grants

4. Award Account Distribution to PI and Department
One final step that cannot be overlooked in the award setup process is the final communication to the PI. After an award is established in the post-award financial
system, documents and account information must be communicated to PIs and key department representatives in a timely manner. Any special or unusual terms or conditions should be noted. It then becomes the PI’s and department’s responsibility to review all award documents and understand all award attributes before beginning the research project.

Succinct and articulate communication to the PI and department is imperative. Research administration should send only relevant material in an easy-to-read format, and ensure atypical terms and conditions receive the necessary emphasis and explanation.

Total award setup cycle time — from award receipt to final communication to the PI granting allowance to spend — can now be captured. This metric measures overall process cycle time as well as interim cycle time (pre, post, department, and ancillary compliance offices) and allows for an assessment of the process efficiency.

Pitfalls at this phase can be avoided with the following step:

◆ Prompt, concise communication to the PI and research team once award setup is complete: although the need for clear communication is uniform throughout the process, it is especially critical at this stage as there are no additional administrative hurdles present that would inhibit the PI from beginning to spend funds awarded from the sponsor.

Two key metrics to begin tracking in this phase:

1. Total award setup cycle time – from award receipt to communication to the PI that he or she may begin spending award funds
2. Percentage of awards with corresponding “pre-award accounts,” as well as the average time before pre-award accounts are converted to effective grant revenue accounts

Frequent communication during the award setup process among all stakeholders is critical to process success. Especially within and across pre-award and post-award offices, free and open exchange of award information is vital for teams and individuals. In larger offices where award setup is supported by a variety of roles, it is crucial that key players remain in constant communication when trying to resolve award setup issues. Also worth highlighting once more for central research administration offices is the importance of communicating with and seeking feedback from its customers, i.e. the PIs and their local administrative support.

It is also important to measure performance metrics, and utilize them to drive process improvement. The benefit derived from capturing and analyzing these metrics will depend on multiple factors, including:

1. Recognizing staff for strong performance when warranted
2. Identifying where additional resources may be needed or where processes can be reviewed and changed to enhance efficiency
3. Detecting process bottlenecks both inside and outside of central pre and post-award offices, e.g. departments, compliance offices, problem sponsors
4. Setting goals for processing times to motivate staff as well as provide detail behind Service Level Agreement with the research community

5. Prioritizing workloads and reducing backlogs, e.g. redeploying staff to focus on awards held up for compliance reasons

6. Transparent reporting to leadership and campus to improve customer service and perception

In summary, optimizing the award setup process will lead to a plethora of tangible benefits for a research institution. A smooth, timely, and informative award setup process, evaluated by well-considered metrics, will boost customer service and satisfaction, improve cash management through the quick conversion of awards received into active research accounts, and enhance institutional compliance.

About the Authors

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Successful Management of Multi-Project Programs
Pamela S. Foster, University of California, Irvine

Over the past two decades, the federal government has increased financial resources allocated to the creation of multi-project programs, many of which involve hundreds of scientists working together from a wide range of different fields across a multitude of institutions and states (Stokols et al, 2010). These programs are expected to increase the rate at which research moves from basic science into clinical practice. These large-scale team research projects challenge research administrators’ ability to efficiently manage their infrastructure. However, by employing strategic planning, developing the proper tools, and efficiently communicating, administrators can be successful in the management of multi-project programs. What, then, are the elements of managing a multi-project program? They include:

1. Creating special terms and conditions.
2. Managing multiple sub-awards and projects.
3. Communicating with Principal Investigators and their administrative staff.
4. Accounting for institutional differences.
5. Tracking information.

In this article, we explore each in turn.

1. Creating special terms and conditions

Sub-awardees are typically held to the terms and conditions of both the funding agency and the prime award institution. Moreover, some federally funded large-scale research projects include special terms and conditions specific to that award. It is advisable to create an appendix to include with the sub-award documentation that outlines each of these terms and conditions. Based on the structure and complexity of your award, developing additional internal policies and procedures may assist you in the management and organization of the program. Consider the following when developing your specific terms and conditions document:

   Compliance Requirements – Human subjects, animal subjects, and any associated biosafety protocols require oversight and compliance. You should define how new protocols involving humans and/or animals will be processed for approval by the prime award institution. Consideration should be given to oversight of protocols, since it is the Principal Investigator and prime institution that are held accountable to the sponsor for compliance. You may want to require investigators to provide you with copies of protocol narratives, consent forms, and letters of approval issued by their IRB, IACUC, or IBC. Additionally, the prime award institution is responsible for ensuring each protocol matches the work as described in the research plan. Decide how this accuracy will be accomplished by asking the following questions: Does your institution delegate this responsibility? Will the funding agency require

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1 This article is reprinted from NCURA Magazine, Volume XLIV, No. 1, Jan/Feb 2012. It is used with permission of the publisher.
any certifications from the prime institution? If so, how will these certifications be reviewed at the prime institution?

**Financial** – For federally funded grants and agreements, OMB Circular A-110 sets forth standards for obtaining consistency and uniformity. OMB Circular A-21, on the other hand, establishes the principles for determining costs applicable to grants, contracts, and other agreements with educational institutions. In order to monitor expenditures on sub-awards, consider requiring sub-awardees to provide a cost category breakdown on their invoices. Cost category breakdowns provide the prime institution with a mechanism for monitoring sub-award spending without requiring line item detail for every expense. Include language regarding the prime institution’s right to audit expenses if needed.

**Intellectual Property** – Establish timely reporting milestones for the disclosure of intellectual property conceived and brought to practice under the grant award or contract. Anticipate in your terms and conditions the possibility that inventions may be jointly owned by the prime and the sub-awardee and will need to be reported in a timely manner to the federal sponsor.

**Reporting** – Language regarding the requirement for scientific and administrative reporting to the prime institution should be included. Reports from the prime institution are generally due within 90 days of the termination of a project period or budget period and data is needed from the sub-awardees to accurately compile the scientific and administrative reports.

**Communicating** – It is advisable to spell out what will be required, who will be communicating with the funding agency, and how the process will go forward. You may want to reemphasize some of the funding agency’s terms and conditions in this section (e.g., restrictions on carry over balances).

2. **Managing multiple sub-awards and projects**

Set up a separate internal account structure to manage the internal projects and the sub-award projects. For instance, administrative core, core facilities, and research projects should each have their own account. Some accounting systems have project/cost center coding, which can be helpful for tracking cost category expenditures for internal projects. Project/cost center coding can also help you to isolate various expenditure categories and can be quite useful when developing future year budgets.

Require sub-awardees to include a cost category breakdown on all invoices. A cost category breakdown will assist in monitoring costs and ensure compliance with allowable expenses. Additionally, developing a system to track invoice activity by sub-award and internal projects can assist in the process of managing individual project activity. Invoices are typically generated from a central accounting office and not within the investigator’s department. The development of a project fund summary report sent to investigators on some regular basis (e.g., quarterly) can improve spending patterns and avoid issues with carry over funding from one budget period to the next.

Sometimes there is a lag between the time when an institution receives final
sub-award documentation and when the department is informed they can begin re-
search. Forwarding a copy of the finalized award documentation to both the investi-
gator and project fund manager can assist them in getting their institution to set up
an account in a timely manner.

3. Communicating with investigators and their staff
Clear and concise communications are critical to the long-term success of multi-
project programs and require research administrators to know who is involved in
performing the research and overseeing the research projects. Get to know your
own campus partners because they can help develop the proper tools for manage-
ment. Find out the players at the sub-award institutions: Who is responsible for
pre-award preparation and post-award management? Who is the primary contact in
the pre-award sponsored project office? Who will prepare and submit the invoices
from the post-award office? This list of individuals at the sub-award institution and
their contact information can significantly improve communications. Make sure to
collect both email and phone numbers as some individuals may respond better via
one over the other.

Once contact information is collected, any communication sent to the investiga-
tor should also be copied to the appropriate research administration personnel in
order to ensure that all individuals are adequately informed.

If possible, an initial face-to-face meeting with the investigator and his or her
staff can be extremely beneficial to getting the appropriate buy-in on adherence of
the program policies and procedures. Take time at these sessions to review special
terms and conditions, annual report criteria, and any other guidelines or issues that
are contained in the award documentation but may be overlooked and/or those
that apply specifically to your award and are not typically included in a notice of
grant award. Make sure it is a two-way conversation; find out what you can do as a
research administrator to assist the investigator and his or her team.

4. Accounting for institutional differences
Take stock of whatever institutional differences that may exist. What do you need
to do to overcome these differences in managing the award? It may take some time
before the institutional differences are discovered. Be prepared to work coopera-
tively with the other institutions to resolve differences to the mutual benefit of both
parties. For example, terms and conditions regarding intellectual property can dif-
fer from institution to institution. By pre-negotiating this language you can avoid
delays in the execution of the sub-award agreement. As soon as a new institution’s
project has been approved for funding it is advisable to begin this pre-negotiation
process. Your sponsored projects and technology transfer offices can assist you in
this pre-negotiation activity. As another example, some institutions (such as federal
laboratories) have very different accounting structures that may negatively impact
their ability to provide the desired type of cost category breakdown on invoices.
Make sure you understand this structure and work with the account manager to
come to some mutual agreement about how invoices will be issued.
5. Tracking information

A useful relational database is an effective management tool. The first step to developing such a database is to identify the elements you will need to track. Contact information, compliance data (such as protocols and export controls), and foreign site samples can be easily maintained in a database. You may also want to include publications, patents, disclosures, and project-generated resources.

Before you begin to develop a database, be sure you have analyzed the process thoroughly. Keep in mind that you may want to add, modify, or change the database as the program grows. Consider what reports you will need to produce: Will you need to sort information in a variety of ways? Will the program enable you to import and export data to provide further flexibility? Development of a flexible database can reduce redundancy, improve accuracy, and assist in the creation of standard forms populated from the data maintained in the database, saving time and ensuring better overall accuracy.

As the federal government continues to increase financial resources to large-scale multi-project programs, keep these key ideas in mind. Set the stage for success by clearly defining all terms and conditions. Common definitions ensure that all parties understand and agree to the criteria. Establish an accounting structure to assist in the management of project expenses; this organization will help ensure efficiency. Build relationships with clear and concise communications and be sure to include the appropriate administrative personnel in the communication string. Work cooperatively and flexibly to develop systems that work to the mutual benefit of all parties. To save time and reduce redundancy, develop a database for tracking information, managing reports, and creating templates. Any size multi-project program can be successfully managed using strategic planning, good organizational skills, and excellent communications.

References


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¶120.12 Managing Grant Funds: How to Spend to Zero
Beth Doiron and Minessa Konecky, Beth Israel Deaconess Medical Center

Introduction
Managing sponsored research funding is unique compared to managing funds in other situations, and does not often follow the established expectations of financial management. Whether managing a business or a personal budget, having extra funds at the end of a budget period is usually viewed favorably. In such cases, a surplus allows for additional investments such as savings, equipment, additional staff, or for something unplanned like a vacation or bonus back to employees. On the other hand, if most businesses or individuals go over budget, there are often options available to cover the expenses such as savings, loans, or credit. In sponsored research, when extra funds remain at the end of a budget period, it usually means the sponsor will reclaim the funds and the awardee loses the money. Conversely, if a project is overspent, there may be no way to pay for the deficit, except a bad debt write off for the organization. Keeping this in mind, the ideal scenario is one where a project spends down to zero perfectly by the end of the grant. Thus begins the Research Administrator’s (RAs) journey to find the path to zero. This process can be difficult when the RAs are receiving pressure from the organization to avoid any amount of deficit and from the investigator who refuses to consider any surplus. Learning to spend grant funds to zero starts with setting up realistic budgets, understanding sponsor spending rules, monitoring daily expenses, and finally results in accurately projecting for the long term.

Realistic Budgets
Preparation and proper budgeting are the keys to ensuring that one is spending in accordance with the sponsor’s guidelines and spending on target.

In principle, spending an awarded budget appropriately down to zero by the end of the project period is a simple process. During grant submission, the budget is developed according to expected expenses and acts as a blueprint for spending during the post-award period. Unfortunately, the carefully constructed blueprint frequently becomes more of a soft guide for spending rather than a concrete path to zero. The unpredictability of circumstances often results in grant expenses fluctuating and leads to a potential surplus or deficit at the end of the budget period. After the grant is submitted, an employee could leave the institution and be replaced by someone with a higher or lower salary, or inflation costs could have resulted in supplies being more expensive than expected. In addition, though it is expected that newer investigators may struggle with the budget development process, even seasoned awardees can approach RAs with unrealistic budgets. Many times investigators do not think in terms of what’s practical, they think in terms of their ideals. They rely on their administrative staff to advise them on fiscally irresponsible or impractical budgets. This task can be difficult when RAs often lack the contextual knowledge to identify an unrealistic budget.

While having appropriate subject understanding can be valuable, RAs do not
need to be technically astute to recognize some of the common warning signs of an unrealistic budget. Figure 120-12.1 illustrates some of the frequent mistakes investigators make when constructing budgets for submission. Though the list is not exhaustive, it provides a helpful overview and starting point for RAs during the initial budget review process.

**Figure 120.12-1. Unrealistic Budget Warning Signs**

- Generic amounts
- No effort budgeted for investigator
- Arbitrary salary and/or fringe rates
- Disproportionate salary to effort
- Basic items are not budgeted for (i.e. no personnel, no subcontract but a subcontract is mentioned)
- Items listed that are not allowed per budget/sponsor rules
- Indirect cost is not considered or calculated incorrectly
- Too many people on the budget
- Not enough people on the budget
- Unrealistic estimates
- Math is wrong

As RAs familiarize themselves with their portfolios and investigators, they often find that each researcher has his/her own idiosyncrasies when it comes to budgeting. For example, some investigators will develop a budget perfectly with minimal input from their RA. Others make the same mistakes over and over. Some of the tips in Figure 120-12.2 can help new RAs advise their investigators to set up realistic budgets.

**Figure 120.12-2. Tips for setting up realistic budgets**

- Project for salary increases (if appropriate)
- Call things what they are
- Get price estimates
- Get approval on pricing agreements
- Read the grant
- Be specific but generic
- Project for cost of living increase (if allowable)
Call things what they are

As a result of increased regulations on sponsored research, including the more detailed financial conflict of interest policies, it is especially important to identify items appropriately. For example, investigators are often under the impression that a subcontract, a collaborator, and a consultant are identical. They label someone a consultant to avoid the cumbersome paperwork that comes with adding a subcontract to a grant. However, the implications of mislabeling a scientific contributor are greater than merely misfiled paperwork. Potential compliance issues could include incorrect calculation of indirect cost or failure to document conflict of interest. Though it may seem easier to the investigator, mislabeling usually creates more work for everyone involved and runs the risk of submitting a non-compliant application.

Multi-Principal Investigator (PI) (Is this shared and separate cost centers or just one?)

In the last few years we have seen more investigators submitting Multi-PI grants, in which each investigator holds equal control over the scientific development and fiscal management of the grant. These collaborations usually include a leadership plan which details how investigators will manage any disagreements. However, when the grant is funded and one investigator has concerns about how the other is spending, the conflict can be difficult to manage even with a leadership plan in place. This situation can be avoided by creating internal budgets for each investigator, resulting in two separate internal accounts for the same project. Though investigators may not deem this necessary during time of submission, separate budgets will provide more clarity in the long run.

8 Spending Rules

Finding a way to identify, document, and track spending rules is vital to ensuring that one is spending on target and according to sponsor guidelines.

One of the principle aspects of managing grant funds is spending to zero compliantly. Since spending guidelines may be anywhere from a few to hundreds of pages and may use different terminology, the challenge for RAs is learning all of the guidelines for all of the different sponsors’ awards they manage. One way to approach this daunting task is to break down the guidelines into the eight common areas of spending rules: cost principles, pre-award spending, fellowship awards, carryover, no cost extension, rebudgeting, invoicing/reporting, and salary/effort cost share. While all policies governing spending are important, being aware of these common topics can focus RAs on what portion of the guidelines should be reviewed for each award.

- Think about the little things
- Multi-PI
- Know your investigators
Cost Principles

Cost principles refer to expenditures which a sponsor considers allowable, allocable, reasonable, and consistently treated. (NIH, 2013) There are certain expenses in research funding that are generally unallowable among different sponsors, such as alcohol, books, office/computer equipment, membership/association fees and administrative salaries. For example, a request for a computer on an unfamiliar small foundation grant may be a red flag to stop and refer to expenditure guidelines, whereas reagents for the same project might be more obviously allowable.

The key to identifying allocable expenses is familiarity with the basics of the study such as knowing if the research includes human or animal experiments, building equipment, or analyzing data. For example, if the study involves computer analysis, then the purchase of animals would clearly not be allocable for the project.

When evaluating the reasonableness of an expense, start by building the justification for an auditor. For instance, it may be justifiable to charge a significant portion of expenses during the last month of the project because the invoices came in late, whereas it would not be reasonable to charge those same expenses because the lab wants to stock up on supplies for a different project.

Lastly, consistency of how expenses are allowed can be often be problematic across an institution because of the nature of different research projects, inadequate systems, or the volume of staff involved in these decisions. Consistency can also be an issue on one project. For instance, if all supplies for a lab serve three projects, it would not be consistent to charge all supplies to the project for a few months, then to split cost across all projects for a few months, then to alternate monthly which project is charged. Consistency can, of course, be improved by implementing good training and auditing programs. But RAs should also be cognizant of applying the same methods consistently and engaging in discussions about questionable expenses with peers or managers as necessary.

Pre-Award Spending

Pre-Award Spending refers to spending before an award letter is received from the sponsor or primary institution. While the National Institute for Health and some federal sponsors generally allow pre-award spending, this is a less common practice among other sponsors. (NIH, 2013) Even if the sponsor allows this type of spending, there is a level of risk that must be assessed before the institution should allow it. Some key items to consider: What if the award letter is never issued, or issued with an even later start date than was anticipated? What is the impact on the overall budget to expend funds before the project start date? Will there be enough funds remaining later in the project period? Frequently, pre-award spending may be necessary during transfer grant situations (when an investigator moves to new institution and there may be delays in transferring grants to that new institution).

Stipend/Fellowship Awards

Although fellowships are a type of award and not a spending rule, they often have special rules governing fringe, the allowed stipend amount, and/or health insur-
ance. In some cases, receipt of a fellowship award may necessitate a change in salary to match the stipend awarded, or the institution may be required to make a fringe adjustment or apply a special code so that systems do not charge fringe.

**Carryover/No Cost Extension**

Carryover and no cost extension are important mechanisms that give RAs room to breathe if the project is not proceeding as expected. Projects frequently have late starts due to delays in staffing, ordering supplies, and waiting for award letters and accounts to be set up. It can be a necessity to know that work can continue and funds can still be spent when too much money remains at the end of a period. While some sponsors allow carryover and/or no cost extensions automatically without their approval, these are also available options even if sponsor approval is required. Investigators who make timely carryover and/or no cost extension requests and those who focus on genuine scientific delays are usually the ones who can successfully obtain sponsor approval. RAs can assist in this process by evaluating remaining balances regularly, or at least no later than three months prior to budget or project end, and by having proactive discussions with investigators to measure the scientific status of the project against remaining funds.

**Rebudgeting**

Rebudgeting refers to taking funds designated for one portion of the budget (i.e. salary) and spending on another (i.e. supplies). (NIH, 2013) Ironically, investigators often think that small foundations give them great flexibility with their grant funds, and yet those very foundations are the ones that require exact financial reporting and explanations for any deviation from the original budget. Sometimes expenditure guidelines may be vague with these foundations. One tip is to preview the actual financial report forms which may bring more clarity to spending expectations. Categories that are exempt from indirect cost need to be closely evaluated with rebudgeting. For example, if money was budgeted for equipment exempt from indirect cost and those funds were used on salary instead, there could be a loss of actual direct cost dollars.

**Invoicing/Financial Reporting**

Most sponsored awards require some form of financial reporting during or after the funded period. Their financial reporting schedule may not run on same the fiscal year of one’s organization and may be required on an annual, bi annual or intermittent basis. Some sponsors only require reporting at the end of the project and allow automatic carry-forward between periods. In such cases a final reconciliation may only be required at the end of the project period. However, annual reporting and carry-forward approval may require that expenses are reconciled at the end of each year.

**Effort/Salary Cost Share**

Cost sharing refers to a portion of a project cost that is not assumed by the sponsor. There are two types of cost sharing: mandatory and voluntary. Mandatory cost sharing is when a sponsor requires that the institution share some of the project
cost, and voluntary cost sharing is when the investigator or institution volunteers to cover some of the project cost from a discretionary source. (NIH, 2013) This discussion will focus on voluntary cost sharing of effort. This mechanism can sometimes be used to save money on an award, since funds that were allocated to salaries can now be reallocated to other expenses. Before utilizing cost sharing as a tool to spend down to zero, consider the following: Does the sponsor allow a cost sharing? Does the institution allow it? What source is covering the cost shared amount?

Learning how the 8 spending rules apply to each award/sponsor is part organization and part knowledge and experience. Finding a process to quickly identify or access the spending rules for each award can help to create efficiency. One option is to track these items on a spreadsheet for each sponsor or grant. Another option is to highlight the 8 spending rules in sponsor guidelines at time of submission. Consider storing sponsor rules in easily accessible places such as electronic folders, grant management systems, browser favorites or on portal pages. Utilizing the 8 spending areas creatively and compliantly can assist RAs reach the goal of spending the grants to zero by the end of the project.

Monitoring Expenses

Monitoring expenses on a daily basis against sponsor rules and remaining budget balance ensures spending on target.

Once a realistic budget is set and the spending rules are determined, the next step to spending to zero is to monitor expenses on a daily basis. Among other things, monitoring includes evaluating whether the expense is allocable, if funds remain, if the correct budget code was used, and if the project is active. Of all the challenges in making these decisions, there are three to think about related to spending on target: knowing the amount left in the budget, assessing the risk and communicating about expenses that can’t be charged to a grant.

Knowing the amount left in the budget

Due to the technology available for post award management, some RAs are able to simultaneously view the current amount left in a project and the expense that is about to be charged. If it was truly that easy and computers handled it all, and handled it all correctly every time, then this chapter would not need to discuss how to spend to zero when managing grant funds. In practice however, there are often unknown expenses: the invoice that is presented for payment a year after the service was performed, or animal colonies that multiplied at a higher rate with a higher cost than in previous months. While RAs can’t account for all the unknowns, they can project for expenses that they do know about, such as subcontract or consultant agreements and salary costs. They can also plan to leave room in the budget for last minute expenses, and talk to the investigator about remaining experiments and the associated costs.

Communicating that an expense cannot be charged to a project

Many RAs say they have no issue explaining to a PI that an expense is not allowable
for some reason or another. They feel secure with the sponsor back-up and docu-
mentation of institutional policies. While there is evidence to support that some
investigators fraudulently and intentionally misuse funds, most investigators either
spend appropriately or do not realize that an item cannot be charged to a grant.
If RAs learn to ask first without judgment, it can actually save time later. It is not
efficient to build a case against an expense and engage in a time consuming email
war as a first step. That is not to say that all situations about appropriate spending
can be collaborative – there will be times when RAs have to communicate unpopular
decisions. However starting out from a cooperative perspective can mitigate the
fallout from those decisions.

Assessing the risk
In a perfect world, there would be time to evaluate every expense and to look up
the budget, dates, amount remaining, sponsor rules and determine if each and
every expense is appropriate to the project. In reality, organizations and the indi-
viduals they employ have to look at the big picture and focus on the highest risk
areas. Some monitoring expense standards are set by the organization, like, using a
purchasing system to track orders and building in approver rules or implementing
dollar amount threshold restrictions. Even with those restrictions in place, many
RAs have human decisions to make: such as if the ice or subject parking is allocable,
able, reasonable and consistently treated. When making those decisions, each
RA has to find the balance between risk, time and efficiency. Finding that balance is
a challenge and the tips in Figure 120-12.3 can help to focus on some of the higher
risk areas.

Figure 120.12-3. Tips for Monitoring Expenses
- When approving an expense, make sure the project is active,
  has funds and that it meets spending requirements
- Pay attention to equipment, software, office supplies and
  consultant invoices
- Pay attention to high dollar expenses
- Pay more attention a few months prior to grant or year end
- Pay attention to the basics of the research study

Accurate Projections
It is not enough to know where the grant finances stand at this moment; one needs to know
what the grant finances are going to look like at the end of the budget and/or project period.

After setting up realistic budgets, adhering to spending rules and monitoring
expenses appropriately, the culmination to spending down to zero is to complete
accurate projections. Monthly budget reconciliation is the process of reviewing
expenses that post to an account against the supporting documentation available,
ensuring that each transaction is compliant with grant cost principles, and resolving any inconsistencies. Projections are used to forecast future expenditures on a project to anticipate the final balance on the award. Knowing in advance whether a grant is projecting a surplus or a deficit allows the investigator and RA to plan and adjust expenses accordingly and to ensure appropriate spending down to zero consistent with the scientific objectives. However, sometimes the challenge for RAs is to ensure that the information contained within the projection is accurate and up to date. Accurate projections can be achieved by reconciling on a monthly basis, minimizing human error and communicating with the investigator regularly.

Reconciling on a monthly basis
Though monthly reconciliation is one of the primary functions of post-award management, RAs are constantly torn between competing deadline-oriented priorities including grant deadlines, large workloads, reduced staff, and increased compliance requirements. Consequently, reconciliations can easily be postponed. However, missing even a month can change projections wildly. For example, experiments change, staff leaves, subcontracts do not complete the work or equipment breaks. Any of these incidents can alter the original grant projections towards a surplus or a deficit. Figure 120.12-4 illustrates the items that should be reviewed during the monthly reconciliation process to ensure an accurate forecast of the final grant balance by the end of the budget or project period.

Figure 120.12-4. Tips for accurate projections
- Review Total Budget (DC/IDC)
- Review Monthly Expenses
- Review Key Payroll Projection/Effort
- Check Total Expense
- Check for any Re-Budgeting
- Cross check numbers
- Overall projection review
- Deficit
- Meet with PI
- Carry-forward
- End Date
- Progress Report
- No Cost Extension
Human Error

Some RAs have an online system that automatically tracks current and expected expenses in real time. However, many RAs are still operating with systems that provide accurate information only up until the previous month’s financial closing date. Consequently, projections must be calculated manually using spreadsheets and complicated tracking systems which provide a prime opportunity for human error. RAs must find a way to mitigate these errors that can and will happen. Some helpful ways to avoid mistakes are: create formulas within spreadsheets that double check other formulas; use reality checks every few months for each grant by doing the math separately from the spreadsheet on paper or a calculator; do not always recycle your spreadsheets and input new data, sometimes it’s important to start from scratch. Finally, perhaps the most important is that each RA has some errors that he/she is prone to making. One must identify what those errors are and implement internal controls to avoid making them.

Knowing what is actually happening in the lab

Managing grant funds and ensuring that awards are appropriately spent down to zero is a collaborative process between the investigator and the RA. The person who knows the most about the progress made on an award and the resources that will be needed to accomplish the goals set forth in the initial submission is the PI. Frequently the PI is aware of upcoming staffing changes, adjustments in subcontracts, equipment replacements, etc. and may not think to tell the RA in a timely manner even though these changes impact grant projections. This is how RAs do not find out that a PI has committed to bringing on a new employee, or that the fellow in their lab is leaving until right before it happens. The consequences of this are that when an RA is asked what the final balance on a grant is expected to be, the numbers that they provide will be incorrect without this information from the PI. Meeting with investigators and identifying changes in staff or large purchases is fundamental to mitigating some of the unpredictability of grant management and ensuring that the data disseminated to stakeholders is accurate.

Conclusion

The information provided in this article is by no means exhaustive, but it does provide a starting point for RAs when thinking about spending down to zero. It is vital for the RA to start with a realistic budget to act as a blueprint for future spending, while keeping a lookout for red flags during the submission process. Once the grant has been funded, paying attention to the 8 spending rules for the sponsor will create efficiency in award management, and ensure that financial decisions are being made proactively instead of reactively. Monitoring expenses ensures that RAs know the amount left in the budget, can assess risk, and communicate about expenses that cannot be charged to a grant. Finally, maintaining an accurate projection spreadsheet for each grant provides the RA with the tools necessary to work with the investigator to assess the fiscal health of the entire research enterprise.
References

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Beth Doiron has over 18 years of financial administration experience specifically with 7 years in research administration. Beth is currently a Research Administrative Supervisor at the Beth Israel Deaconess Medical Center. Her experiences in healthcare revenue cycle management, student loan default aversion counseling, financial counseling for uninsured patients and research administration give a well-rounded viewpoint about what it means to spend to zero when managing a budget. Beth stays active in the research administration community with presentations on various topics such as budgeting, customer service and monitoring subcontracts. Beth holds a Masters in Library and Information Science and job experience in corporate training, both of which drive her to find ways to share information in tangible ways. She can be reached at bdoiron@bidmc.harvard.edu

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Using a Client Survey to Support Continuous Improvement: An Australian Case Study in Managing Change

Janice Besch, Western Sydney University

Abstract
With the arrival of online survey tools that are low-cost, readily available and easy to administer, all organizations have access to one of the most effective mechanisms for determining quality improvement priorities and measuring progress towards achieving those priorities over time. This case study outlines the use made of this simple tool by a research office in one of Australia’s most research-intensive universities during a substantial change management exercise over the period 2008–2011. The rationale for reaching out to the University’s researchers as clients; basic principles followed to ensure high response rates and robust results; uses made of the data; and contribution to the change process are described, with a view to assisting research management professionals who are setting in place similar monitoring systems as an alternative to, or complementing, process-related (time and effort on task) performance data.

Context
The research office that is the subject of this case study was substantially restructured in 2008 with the specific and simple objective of improving researchers’ satisfaction with the University’s research management services. The objective was not a gratuitous one. Researchers require robust management systems to support their activities in a funding environment that is highly competitive and carrying a significant compliance burden. If they are not well supported, they are likely to scale down, or fail in, their grant seeking activities; funding will diminish; and there is a risk that whole research programs could be shut down due to compliance breaches. An effective barometer for excellent research management will undoubtedly be how it is perceived by those who rely on it.

Over the period covered by this case study, the research office managed significant volumes of applications (around 1,200 annually), grants (upwards of 1,500 under management), accounts (over 5,000 individual research accounts), and upwards of $200 million AUD in external research funding. As are all research offices of this size and scale, it was a high pressure environment where deadlines were externally driven, workloads had significant peaks at certain times of year, and a great deal was at stake for individual researchers and the university.

The office’s restructure represented the second significant restructure of research management delivery at the university in a three-year period. The first restructure had caused significant disruption to existing workflows and disquiet among the grants management staff. A quite complex matrix structure had been set in place, with dual reporting lines leading to a lack of clarity as to where actual responsibility

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for actions lay.

The first restructure had been operationalized via an external consultancy with no continuity through early stage implementation. Unsurprisingly there was little ownership of the arrangements among office staff and external stakeholders. During one-to-one conversations, researchers reported “not knowing who to talk to anymore” and provided numerous instances of grant management issues having arisen and been left unresolved. The unfortunate consequence was that the staff who could have made a positive difference were firmly entrenched in ‘bunker mode’. From their perspective, the fault lay with the restructure. Past arrangements were better and it was unfair that the perceptions of poor service delivery were being seen as ‘their fault’.

**Rationale for Using the Online Survey Tool**

Sharon Cole, in her article “Reframing research administration” (Cole, 2010) concluded that a co-operative approach involving faculty and administrators and attention to organizational culture are vital ingredients for successful improvement in research services delivery. The situation was evidence of this and the survey tool was directed at both of these imperatives. It would provide an avenue for broad stakeholder input and engagement in the change process and demonstrate the office was listening and responding in a proactive way.

The 2007 restructure had adopted a hierarchical approach with a twist—a small Operations Unit was established alongside the customer-focused Grants and Ethics Teams, to ensure consistency of process, deal with generic activities (creation of ‘shell’ records; file establishment; system-driven communications), manage and continuously improve systems (including database management), and conduct quality assurance. The customer-focused teams, on the other hand would have a firm focus on researchers, with service and relationship-building as key drivers for their work.

The structure was very different from anything in place in the larger Australian universities; it introduced high levels of accountability and challenged the formerly very autonomous management culture. Low morale among the staff, weary of change, meant that over the first twelve months most positions were re-filled. This led to further controversy and unease amongst stakeholders.

Given the climate of discontent and the major change agenda, the client survey tool was going to provide a ‘line in the sand’. Researchers would be able to rate all services provided by the office and remark on whether they perceived any improvements, as well as provide comments and suggestions and endorse particular members of staff whom they had found helpful over the last 12 months. The responses would provide the office with clear direction on what areas of the business to prioritize in order to achieve positive outcomes. As importantly, the survey would ensure that those involved in and impacted by the change management process focused on the relevant time period. Researchers had hitherto been demonstrating long memories—quoting poor service or an instance of bad practice from several years prior if canvassed for their opinion of the Office. The survey would lock down those obser-
vations and relegate them to history.

All the same, the exercise was met with scepticism from some quarters, not least a number of key staff who expressed such reasons as ‘you will never make some researchers happy’ and ‘the ones that like us won’t respond’ to argue the futility of the exercise.

**Basic Principles Followed**

The survey was voluntary and more in the nature of a conversation than a quantitative tool to test particular assumptions. All researchers who had applied for a research grant received an email invitation to provide feedback (rather than complete a survey) on the office’s services, so that issues could be addressed and future service delivery could be improved. The information collected did not include personal information. However, the respondent was given the option of providing an email address if they wanted a staff member to contact them to discuss an issue they had raised. The purpose of the exercise was clearly described—the office was committed to continuous improvement and feedback would be used to develop and improve services over time. People who participated would be informed of findings and the progress that was being made to address issues raised.

All of the office’s stakeholders, including other university professional staff, were individually contacted and invited to provide their views. This amounted to around 1,100 individuals who had interacted with the office in any one year, rising over time. In later years, a friendly invitation to complete the survey was also added to staff email signatures. This re-enforced the message that the office was looking for input on how to improve services, created impetus (the invitation was connected with their experience of service delivery), and led to much higher response rates (rising from just over 20% in the first survey to more than 35% in 2011). The consistency in the responses received suggested this return rate was adequate for good judgment at the outset, and more than enough by 2011.

Only a few questions were asked. Respondent burden was kept low and the invitation alerted respondents to the fact that the survey would be a quick 5-minute exercise. Every question was neutral, with a view to simply covering all service delivery aspects. The wording of questions was simple and unambiguous so as to provide clear guidance on quality improvement opportunities.

The questions were a mix of ratings and open-ended opportunities to elaborate on service delivery and never failed to produce a rich set of responses and a real sense of how the office was performing. The questions looked back—“do you think we’ve improved or gone backwards?” They also looked forward—“what would you like to see us change for next year...?”

The ratings scale was a 6-point scale ranging from very high to very low, and did not allow respondents to ‘fence sit’. The middle rankings had the descriptors ‘better than average’ and ‘worse than average’. This would force respondents to put forward a considered view even if they had not thought a great deal about the office’s services in the past. The underlying message was ‘tell us what you really and reasonably think we should be achieving’. 
The seven standard annual questions were neutral in the sense that they did not try to focus on any particular known issue or concern, and covered:

- Respondent role (stage of career, researcher, executive, administrator, new to UNSWA, new to the office). Respondents could indicate that they had multiple roles. This allowed us to analyze the rankings by stakeholder group.
- How they rated the office’s services. This was presented as a table of services, from pre-award support to legal and ethics clearances, provision of research data, communications, and training. Opportunity for an open-ended comment was provided at the bottom of this table. Interestingly, a not uncommon open-ended comment was “I didn’t know you did all of those things”, suggesting the survey was raising awareness of the comprehensive nature of the office’s pre-and post-award service delivery.
- What they liked about the office’s services in the year
- What they would like to see changed in the following year
- Whether they thought services had improved, stayed the same, or gone backwards (or had no view)
- Whether they would like to commend any particular staff members
- Whether they would like to make any further comments

Sometimes other ‘omnibus’ questions were cautiously added about particular management issues—for example, in 2011 two questions were added about perceptions of training delivery and whether researchers would like to receive communications via new media (Twitter; Facebook, etc.). The importance of maintaining a balance between survey burden and opportunity to learn more was a foremost consideration.

**Uses Made of the Data**

Initial concerns that the exercise might provide a vehicle for a minority of disgruntled people to unreasonably criticize the office were quickly dispelled. The feedback was always remarkably consistent across the respondent pool and, as many a market research professional will say, they had a commonsense ‘feel’ to them, confirming in the main what staff already knew about service delivery weaknesses and providing a mandate for addressing issues raised.

Those staff who expected the worst were pleasantly surprised to find that the number of people who rated their services on the positive side of the scale outnumbered those who expressed dissatisfaction, and that only a very few researchers had extremely negative views. What emerged was a sense that the office’s clients were equally and reasonably invested in service improvement. They became, in a very real sense, part of the quality improvement team through having aired their views.

The results were reported back to stakeholders after analysis and the actions that had been taken to respond to issues raised formed a brief preamble to the next year’s call for feedback. Year-on-year comparisons were reported to the Committee on Research and the Vice Chancellor’s Advisory Council, ensuring that senior man-
agement were as well informed as those close to the coalface, and aware of the continuous improvement efforts and achievements being made. Individual staff used examples from actions arising when preparing their documentation for their annual performance appraisal, creating grassroots buy-in both to hearing what people had to say about service delivery and doing something about it.

**Contribution to the Change Process**

The results were a primary input for the annual research office staff retreat. As themes emerged, staff became active in contributing to addressing identified needs not just during the planning day but throughout the year. For example, the main concerns expressed one year were around an apparent lack of consistency in advice given at the pre-award stage. The grants teams responded by leading a comprehensive recruitment and training strategy for the casually appointed compliance advisers and introducing checklists and in-round debriefs that ensured consistency of advice.

The following year, the scales tipped further into the positive and the feedback from researchers then focused on a desire for personal attention and value-added strategic counselling, over and above the (now consistently provided) basic compliance advice.

Similarly, a concern regarding phone responsiveness was met with the appropriate technical and team response, and with due acknowledgment to the changing nature of office communications.

Over time the only difficult-to-address issues became those for which the office’s operations were reliant on the input of other departments. In those instances, the customer feedback was a primary, objective driver for the negotiation of service-level agreements that had quality assurance at their core.

Commendations were passed on and successes from year to year celebrated. The office developed a continuous improvement culture and its stakeholders continued to demonstrate their willingness to articulate room for improvement, in a positive way, by providing constructive input and taking the time to provide praise where praise was due.

**Future Directions**

At the time this case study was prepared, the office was relying primarily on the annual customer satisfaction survey and a handful of other high-level indicators to measure its annual service effectiveness. Transaction times were being used only in the area of ethics application review, where deadlines tend not to be set by funding agency grant rounds, making internal tracking more important. However, the electronic grants management system in use at the office provides for load reporting as well as transaction time reporting and the workflows are well-documented, allowing case-by-case consideration of staff resourcing, process effectiveness, and staff responsiveness.

While the annual call for feedback provided an important catalyst for positive change and responsive service delivery, a next step in optimizing efficiency and ef-
fectediveness might lie in seeking improvements at a more granular level and taking a more comprehensive approach. Smith and Gronseth (2011) outlined a comprehensive Quality Management Systems approach to improving research administration at the Mayo Clinic as one way forward. Its RISE initiative includes guidance on structuring a team-driven change exercise that captures key performance data on system efficiencies that can be analyzed at regular intervals and such supporting initiatives as the designation of particular staff as Research Quality Coordinators who look for continuous improvement over time.

**Conclusion**

The office’s annual call for feedback using an online tool was a simple and effective means of addressing a number of pressing change imperatives. In providing an annual opportunity for everyone involved in the research enterprise to pause and reflect on how things had gone that year and to quickly and easily engage in a basic conversation about service provision, it built a culture supporting change. It allowed those who wanted change to articulate exactly what kind of change they were seeking, across any and all aspects of service. It allowed staff to respond and report back on how they were addressing issues over time. And it allowed those who wanted to acknowledge good service to do so, ‘on the record’. It put everyone on the same page, and kept people focused on, and rewarded for, continuous improvement. Importantly, news of performance and progress was incorporated in whole-of-university reporting at the senior executive level. Past perceptions of faculty as impossible to please, and administrators as only interested in getting the rules right, were able to be seen for what they were—a mythology with little foundation and without justice to all concerned.

**Literature Cited**


130  **Practical Tools**

This section includes practical tools — flowcharts, checklists, etc. — relating to topics of general relevance to sponsored research administrators. These materials are culled from a variety of authoritative sources.

130.1  **Grant Award Life Cycle Flow Chart**

Sponsored research administrators support the research mission of the university. The role of a research administrator is often viewed as “sitting” between the principal investigator/researcher and the sponsor throughout an award’s “life cycle,” as depicted in Figure 130.1-1. (For an in-depth discussion of pre-award services and post-award administration, see Chapters 2500 and 3300, respectively.)

<table>
<thead>
<tr>
<th>Pre-Award</th>
<th>Post-Award</th>
<th>Closeout</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Development</strong></td>
<td><strong>Agency Review (6-9 mos)</strong></td>
<td><strong>Project Period</strong></td>
</tr>
<tr>
<td>Submit Proposal</td>
<td>Revised Budget</td>
<td>1st Budget Period</td>
</tr>
<tr>
<td></td>
<td>Pre-Award Costs</td>
<td>2nd Budget Period</td>
</tr>
<tr>
<td></td>
<td>Award</td>
<td>3rd Budget Period</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No Cost Extension</td>
</tr>
<tr>
<td><strong>Award</strong></td>
<td><strong>Perform</strong> (Principal Investigator)</td>
<td><strong>Technical Close</strong> (Principal Investigator)</td>
</tr>
<tr>
<td><strong>Apply</strong></td>
<td><strong>Administer/Monitor</strong> (Post-Award Office)</td>
<td><strong>Financial Close</strong> (Post-Award Office)</td>
</tr>
<tr>
<td><strong>Find/Explore</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


continued
**Figure 130.1-1** (continued)

**Find/Explore**
- Principal investigator (PI) has an idea for a sponsored project
- PI needs source of funding (“sponsor”)
- Application guidelines/instructions reviewed

**Apply**
- Application prepared (both technical and financial)
- Application reviewed within school/unit
- Application reviewed by institutional official and submitted to sponsor
- Institutional approval documentation for animal use and/or use of human subjects (note: could happen before application review)
- If required, revised budgets, other documents, and supporting documentation are submitted to sponsor

**Award**
- Award notice received from sponsor
- Award notice matched to application packet and transferred to Post-Award Office

**Administer/Monitor** (Post-Award Office)
- Award packet received from Pre-Award Office
- Award information set up in accounting system
- PI receives account set-up notice and account number
- Subawards to collaborating institutions are prepared and issued
- Review accounts and approve expenditure documents
- Fulfill sponsor financial reporting requirements by preparing financial reports and managing cash receipts on awards
- Manage effort reporting system
- Monitor and/or review budget revisions/program plan changes and enter into financial system

**Perform** (Principal Investigator)
- Conduct work on sponsored project
- Review/approve expenditures and account balances
- Review/approve effort report certification for project employees
- Fulfill sponsor requirements for technical reporting
- Prepare any budget revision/program plan changes for institutional and/or sponsor approval
- Prepare noncompeting applications (if required by sponsor)
Financial Close (Post-Award Office)
- Review accounts and ensure financial reporting deadlines are met
- Maintain cash flow and ensure that amounts of cash received match expenditures reported
- Submit interim and financial reports to sponsor
- Manage record retention
- Acts as a point of contact for audits of sponsored projects

Technical Close (Principal Investigator)
- Fulfill all final technical reporting requirements, including patent disclosure, invention statements, or equipment inventory
- Ensure that all expenses are appropriate for the project and that all obligations have been liquidated prior to the submission of the final financial report
- Inform Post-Award Office of submission of final technical report
- Participate in any audit interviews, as required
Although Figure 130.1-2 presents the “life cycle” of a grant from a different perspective, it still makes it clear that the research administrator, below represented as part of the “grantee organization,” does indeed “sit” between the principal investor and the sponsor.

**Figure 130.1-2: Life Cycle of an NIH Award**

- **Initiates Research Idea & Prepares Application**
- **Conducts Research**
- **Submits Application**
- **Manages Funds**
- **NIH**
- **Institute Makes Funding Decisions & Awards**
- **National Advisory Council Recommends Action**
- **CSR Assigns to SRG and Institute**
- **SRG Evaluates for Scientific Merit**
- **Institute Evaluates for Program Relevance & Balance**

*Note: CSR = Center for Scientific Review; SRG = Scientific Review Administrator.*  
*Source: Presentation by James F. Hyde, Ph.D., Program Director, NIDDK, National Institutes of Health.*
\[\textbf{130.2 Federal Requirements Relating to Sponsored Research}\]
AIS editors

The following is a simple, straight-forward listing of the panoply of regulations and certifications applicable to institutions of higher education, as appropriate, with respect to the administration of federal grants, cooperative agreements, and contracts. These requirements — the number and complexity of which has grown over the years — stem from laws passed to achieve social, economic, and research-related goals. Given the number and range of these requirements, it is no wonder “compliance” is consistently chosen as a top priority of sponsored research administrators.

(For an overview of research compliance, see Chapter 1500. For a discussion of the regulatory environment and legal considerations, see Chapters 1300 and 2900, respectively.)

\begin{table}[h]
\centering
\begin{tabular}{|l|}
\hline
\textbf{Regulatory Framework} \\
37 CFR 401 (Patents and Inventions) & ☐ \\
Circular A-21 & ☐ \\
Circular A-110 & ☐ \\
Circular A-133 & ☐ \\
Coordinated Review (Executive Order 12372) & ☐ \\
Cost Accounting Standards & ☐ \\
CREATE Act & ☐ \\
Federal Acquisition Regulations & ☐ \\
Paperwork Reduction Act & ☐ \\
\hline
\textbf{Various Administrative Requirements} \\
Acknowledgment of Federal Grant Support & ☐ \\
American Recovery and Reinvestment Act (ARRA) & ☐ \\
Buy American Act & ☐ \\
Certain Assurances, Representations, Certifications, and Warranties & ☐ \\
Certification of Accuracy of Indirect Costs & ☐ \\
\hline
\end{tabular}
\caption{Checklist of Range of Federal Requirements Relating to Sponsored Research}
\end{table}

\textit{Note:} Different requirements may apply depending upon whether the funding mechanism used is a grant, cooperative agreement, or contract.

\textit{continued}
<table>
<thead>
<tr>
<th><strong>Figure 130.2-1</strong> (continued)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certificate of Current Cost and Pricing Data</td>
</tr>
<tr>
<td>Certificate of Technical Data Conformity</td>
</tr>
<tr>
<td>Constitution and Citizenship Day</td>
</tr>
<tr>
<td>Debt Delinquency</td>
</tr>
<tr>
<td>Disclosure of Foreign Gifts, Contracts, and Relationships</td>
</tr>
<tr>
<td>Employment Eligibility Verification (e-Verify)</td>
</tr>
<tr>
<td>Federal Funding Accountability and Transparency Act (FFATA)</td>
</tr>
<tr>
<td>Fly America Act</td>
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<tr>
<td>Hotel and Motel Fire Safety Act of 1990</td>
</tr>
<tr>
<td>Metric Conversion Act</td>
</tr>
<tr>
<td>Military Recruiting</td>
</tr>
<tr>
<td>Prompt Payment</td>
</tr>
<tr>
<td>Reducing Text Messaging While Driving (Executive Order 13513)</td>
</tr>
<tr>
<td>Salary Caps</td>
</tr>
<tr>
<td>Ship American Act</td>
</tr>
<tr>
<td>Smoke-Free Workplace (Pro-Children Act)</td>
</tr>
<tr>
<td>Use of Seat Belts</td>
</tr>
</tbody>
</table>

**Antidiscrimination**

| Affirmative Action for Special Disabled and Vietnam Era Veterans | ☐ |
| Age Discrimination Act of 1975 | ☐ |
| Americans with Disabilities Act | ☐ |
| Civil Rights Act of 1964 | ☐ |
| Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 | ☐ |
| Drug Abuse Office and Treatment Act of 1972 | ☐ |
| Equal Employment Opportunity | ☐ |
| Limited English Proficiency (Executive Order 13166) | ☐ |
| Notification of Employee Rights Under Federal Labor Laws | ☐ |
| Rehabilitation Act of 1973 (Employment of the Handicapped) | ☐ |
| Service-Disabled Veteran-Owned Small Business Concerns | ☐ |
| Sex Discrimination (Title IX) | ☐ |
| Utilization of Small and Small Disadvantaged Business Concerns | ☐ |
Utilization of Small Businesses in HUBZones
Utilization of Women-Owned Small Businesses
Veteran-Owned Small Business Concerns

Data
Publication Restrictions
Rights in Data

Employee Relations
Bloodborne Pathogens
Byrd Amendment Concerning Lobbying
Combating Trafficking in Persons
Contract Work Hours and Safety Standards Act of 1962
Copeland (Anti-Kickback) Act
Davis-Bacon Act
Drug-Free Schools and Communities Act
Drug-Free Work Force
Drug-Free Workplace
Fair Labor Standards Act
Hatch Act
Lobbying Disclosure Act of 1995
Occupational Safety and Health Act of 1970
Service Contract Act of 1965
Walsh-Healey Public Contracts Act
Workplace Substance Abuse Programs

Environmental Protection
Aquatic Nuisance Prevention
Clean Air Act
Clean Water Act
Evaluation of Flood Hazards in Flood Plains
Flood Disaster Protection Act
National Environmental Policy Act of 1969
Protection of Wetlands
Safe Drinking Water Act

continued
### Export Controls
- Embargoes: Office of Foreign Assets Control (U.S. Department of the Treasury)
- Export Administration Regulations (EAR)
- International Traffic in Arms Regulations (ITAR)

### Historic Preservation
- Archaeological and Historic Preservation Act of 1974
- National Historic Preservation Act of 1966
- Protection and Enhancement of the Cultural Environment

### Misconduct, Fraud, Waste, and Abuse
- Anti-Kickback Act of 1986
- Conflict of Interest
- Covenant Against Contingent Fees
- Debarment and Suspension
- False Claims Act
- Federal Awardee Performance and Integrity System (FAPIIS)
- Misconduct in Science
- Procurement Integrity
- Truth in Negotiations Act

### Privacy
- Confidentiality of Patient Records
- Data Access (Shelby Amendment)
- Data Quality
- Freedom of Information Act
- HIPAA Patient Privacy Rule
- Privacy Act of 1974

### Protection of Living Things
- Endangered Species Act of 1973
- Human Embryo Research and Cloning
- Human Subjects Protection
- Lead-Based Paint Poisoning Prevention Act
- Marine Mammal Protection Act
| Research Involving Recombinant DNA Molecules | ☐ |
| Use of Animals in Research | ☐ |
| **Safety and Security** | |
| Access to Certain Radioactive Materials | ☐ |
| Chemical Facilities Anti-Terrorism Standards (CFATS) | ☐ |
| Foreign Nationals | ☐ |
| Information Technology Systems Security | ☐ |
| Public Health Security and Bioterrorism Preparedness and Response Act of 2002 | ☐ |
| Select Agents | ☐ |
| Student Right-to-Know and Campus Security Act (Clery Act) | ☐ |
| USA PATRIOT Act | ☐ |

*Source: This list is taken from Regulation and Compliance: A Compendium of Regulations and Certifications Applicable to Sponsored Programs, 2011, published by National Council of University Research Administrators in conjunction with Atlantic Information Services, Inc., www.AISEducation.com.*
§130.3 Sources of Federal Funding
AIS Editors

More than 1,000 grant programs are offered by 26 federal grant-making agencies, in 21 main categories (see box, this page). Information about grant opportunities typically can be obtained from Grants.gov using its FIND function or at individual agency Web sites (see Figure 130.3-6, page 130:14).

Research administrators should remind faculty, when completing applications, to review carefully and individually each application and relevant reporting forms (and relevant version of forms) and administrative requirements pertaining to the application, as agency-specific requirements may vary. When receiving an award, the award document lists terms and conditions (see §1320.4), applicable Office of Management and Budget (OMB) circulars, agency regulations, and implementing governmentwide requirements (see §1305).

Figures 130.3-1 through 130.3-5 provide interesting snapshots of trends in federal research support to institutions of higher education. (For additional, overall trends in federal support, see §160.1.)

**Categories of Federal Grant Support**
- Agriculture
- Arts
- Business and Commerce
- Community Development
- Consumer Protection
- Disaster Prevention and Relief
- Education
- Employment, Labor and Training
- Energy
- Environmental Quality
- Food and Nutrition
- Health
- Housing
- Humanities
- Information and Statistics
- Law, Justice and Legal Services
- Natural Resources
- Regional Development
- Science and Technology
- Social Services and Income Security
- Transportation

**Figure 130.3-1: U.S. Government Spending on Grants and Contracts**

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grants ($ billions)</td>
<td>406.3</td>
<td>493.7</td>
<td>450.1</td>
<td>441.6</td>
<td>490.9</td>
<td>518.5</td>
<td>573.0</td>
<td>459.2</td>
<td>4.590 trillion</td>
<td></td>
</tr>
<tr>
<td>Contracts ($ billions)</td>
<td>263.5</td>
<td>318.3</td>
<td>346.4</td>
<td>429.8</td>
<td>475.2</td>
<td>541.9</td>
<td>537.9</td>
<td>315.4</td>
<td>5.452 trillion</td>
<td></td>
</tr>
</tbody>
</table>

* Includes Recovery Act money
Source: USAspending.gov, accessed August 2011
Figure 130.3-2: Federally Funded R&D Expenditures at Universities and Colleges, by S&E Field and Agency, FY 2008
(by percent, rounded)

<table>
<thead>
<tr>
<th>Field</th>
<th>Defense</th>
<th>Energy</th>
<th>HHS</th>
<th>NASA</th>
<th>NSF</th>
<th>USDA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Fields</td>
<td>10%</td>
<td>4%</td>
<td>58%</td>
<td>4%</td>
<td>12%</td>
<td>3%</td>
<td>9%</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>13%</td>
<td>16%</td>
<td>18%</td>
<td>15%</td>
<td>31%</td>
<td>0.3%</td>
<td>7%</td>
</tr>
<tr>
<td>Mathematics sciences</td>
<td>11%</td>
<td>3%</td>
<td>27%</td>
<td>1%</td>
<td>50%</td>
<td>1%</td>
<td>6%</td>
</tr>
<tr>
<td>Computer sciences</td>
<td>31%</td>
<td>4%</td>
<td>6%</td>
<td>2%</td>
<td>45%</td>
<td>0.3%</td>
<td>12%</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>9%</td>
<td>5%</td>
<td>3%</td>
<td>14%</td>
<td>35%</td>
<td>4%</td>
<td>30%</td>
</tr>
<tr>
<td>Life sciences</td>
<td>3%</td>
<td>1%</td>
<td>84%</td>
<td>0.5%</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
</tr>
<tr>
<td>Psychology</td>
<td>5%</td>
<td>0.5%</td>
<td>75%</td>
<td>1%</td>
<td>8%</td>
<td>0.2%</td>
<td>9%</td>
</tr>
<tr>
<td>Social sciences</td>
<td>8%</td>
<td>2%</td>
<td>37%</td>
<td>1%</td>
<td>16%</td>
<td>5%</td>
<td>31%</td>
</tr>
<tr>
<td>Other sciences</td>
<td>27%</td>
<td>5%</td>
<td>17%</td>
<td>4%</td>
<td>24%</td>
<td>1%</td>
<td>22%</td>
</tr>
<tr>
<td>Engineering</td>
<td>36%</td>
<td>10%</td>
<td>11%</td>
<td>7%</td>
<td>20%</td>
<td>1%</td>
<td>16%</td>
</tr>
</tbody>
</table>


Figure 130.3-3: Federal Share of R&D Expenditures at Universities and Colleges by Field, FY 2006
(Millions of current dollars)

<table>
<thead>
<tr>
<th>Field</th>
<th>All expenditures</th>
<th>Federal expenditures</th>
<th>Federal as % of all expenditures</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Non-S&amp;E Fields</td>
<td>1,880</td>
<td>773</td>
<td>41%</td>
</tr>
<tr>
<td>Business and management</td>
<td>248</td>
<td>53</td>
<td>21%</td>
</tr>
<tr>
<td>Communications/journalism/library science</td>
<td>85</td>
<td>30</td>
<td>35%</td>
</tr>
<tr>
<td>Education</td>
<td>817</td>
<td>435</td>
<td>53%</td>
</tr>
<tr>
<td>Humanities</td>
<td>214</td>
<td>56</td>
<td>26%</td>
</tr>
<tr>
<td>Laws</td>
<td>68</td>
<td>28</td>
<td>41%</td>
</tr>
<tr>
<td>Social work</td>
<td>90</td>
<td>40</td>
<td>44%</td>
</tr>
<tr>
<td>Visual/performing arts</td>
<td>46</td>
<td>4</td>
<td>9%</td>
</tr>
<tr>
<td>Other non-S&amp;E fields not elsewhere classified</td>
<td>313</td>
<td>128</td>
<td>41%</td>
</tr>
<tr>
<td>All S&amp;E Fields</td>
<td>47,760</td>
<td>30,033</td>
<td>63%</td>
</tr>
<tr>
<td>Computer sciences</td>
<td>1,438</td>
<td>1,015</td>
<td>71%</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>2,602</td>
<td>1,763</td>
<td>68%</td>
</tr>
<tr>
<td>Life sciences</td>
<td>28,831</td>
<td>18,268</td>
<td>63%</td>
</tr>
<tr>
<td>Agricultural sciences</td>
<td>2,794</td>
<td>881</td>
<td>32%</td>
</tr>
<tr>
<td>Biological sciences</td>
<td>9,044</td>
<td>6,240</td>
<td>69%</td>
</tr>
<tr>
<td>Medical sciences</td>
<td>15,808</td>
<td>10,434</td>
<td>66%</td>
</tr>
<tr>
<td>Life sciences not elsewhere reported</td>
<td>1,186</td>
<td>713</td>
<td>60%</td>
</tr>
<tr>
<td>Mathematical sciences</td>
<td>530</td>
<td>373</td>
<td>70%</td>
</tr>
<tr>
<td>Physical sciences</td>
<td>3,823</td>
<td>2,705</td>
<td>71%</td>
</tr>
<tr>
<td>Psychology</td>
<td>875</td>
<td>629</td>
<td>72%</td>
</tr>
<tr>
<td>Social sciences</td>
<td>1,703</td>
<td>711</td>
<td>42%</td>
</tr>
<tr>
<td>Engineering</td>
<td>7,076</td>
<td>4,236</td>
<td>60%</td>
</tr>
</tbody>
</table>

NOTES: Detail may not add to total because some respondents reporting non-S&E R&D expenditures did not break out total and federal funds by non-S&E fields. Not all fields reported in this table.
Source: National Science Foundation, Science and Engineering Indicators 2008, Table 5-1 and Figure 5-2, www.nsf.gov/statistics/seind08
Figure 130.3-4: Federal R&D Funds
By Type of Work: 1986-2008


Figure 130.3-5: Federal Basic and Applied Research Funds
By S&E field: 1986-2008

| Provides economic and humanitarian assistance in more than 100 countries |
| Corporation for National and Community Service — [www.nationalservice.org](http://www.nationalservice.org) |
| Grants information: [www.nationalservice.org/egrants](http://www.nationalservice.org/egrants) |
| Largest source of federal funds supporting service and volunteering |
| Department of Agriculture — [www.usda.gov](http://www.usda.gov) |
| See National Institute of Food and Agriculture (NIFA) at [www.nifa.usda.gov/funding/application_info.html](http://www.nifa.usda.gov/funding/application_info.html) |
| Department of Commerce — [www.commerce.gov](http://www.commerce.gov) |
| See individual Web sites for Economic Development Administration, International Trade Administration, National Institute of Standards & Technology, National Oceanic & Atmospheric Administration |
| Department of Defense — [www.defenselink.mil](http://www.defenselink.mil) |
| See individual Web sites for Office of Naval Research, Army Research Office, Air Force Office of Scientific Research, and department laboratories |
| Department of Education — [www.ed.gov](http://www.ed.gov) |
| Grants information: [www.ed.gov/fund/grant/about/grantmaking](http://www.ed.gov/fund/grant/about/grantmaking) |
| Provides funds to help strengthen teaching and learning in colleges and other postsecondary institutions and to support rehabilitation, adult education, research and development, statistics and assessment |
| Department of Energy — [www.doe.gov](http://www.doe.gov) |
| Grants information: [www.energy.gov/forresearchers.htm](http://www.energy.gov/forresearchers.htm) |
| Goal is to advance national, economic and energy security in the United States, promote scientific and technological innovation, and ensure environmental cleanup of the national nuclear weapons complex. See individual Web site for Office of Science. |
| Department of Health and Human Services — [www.hhs.gov](http://www.hhs.gov) |
| Grants information: [www.hhs.gov/grants/index.html](http://www.hhs.gov/grants/index.html) |
| Administers more grant dollars than all other federal agencies combined; National Institutes of Health supports tens of thousands of biomedical research projects (see [http://grants2.nih.gov/grants/oer.htm](http://grants2.nih.gov/grants/oer.htm)) |
| Grants information: [www.dhs.gov/xopnbiz/grants](http://www.dhs.gov/xopnbiz/grants) |
| Research is designed to counter threats to the homeland, both by improvements to current capabilities and development of new capabilities |
| Department of Housing and Urban Development — [www.hud.gov](http://www.hud.gov) |
| The Department of Housing and Urban Development’s mission is to increase homeownership, support community development and increase access to affordable housing free from discrimination. HUD fulfills this mission, in part, by forming partnerships with community organizations. |
| Department of the Interior — [www.doi.gov](http://www.doi.gov) |
| See individual Web sites for the U.S. Fish & Wildlife Service and U.S. Geological Survey |
| Department of Justice — [www.usdoj.gov](http://www.usdoj.gov) |
| Grants information: [www.usdoj.gov/10grants](http://www.usdoj.gov/10grants) |
| Offers funding opportunities to conduct research, to support law enforcement activities in state and local jurisdictions, provide training and technical assistance, and implement programs that improve the criminal justice system; see Office of Justice Programs |
| Department of Labor — [www.dol.gov](http://www.dol.gov) |
| See individual Web sites for Employment and Training Administration, Occupational Safety and Health Administration, Mine Safety & Health Administration, Bureau of International Labor Affairs, Veterans’ Employment and Training Service, and Office of Disability Employment Policy |

**Figure 130.3-6: Federal Funding Agencies**
Figure 130.3-6, continued

Department of State — www.state.gov
Grants information: www.exchanges.state.gov
Strives to create a more secure, democratic and prosperous world for the benefit of the American people and the international community.

Department of Transportation — www.dot.gov
Mission is to ensure fast, safe, efficient, accessible and convenient transportation that meets vital national interests and enhances the quality of life of the American people, today and into the future.

Department of the Treasury — www.ustreas.gov
Grants information: http://fms.treas.gov/faq/grants.html
The Department of Treasury is a steward of U.S. economic and financial systems, and promotes conditions for prosperity and stability in the U.S., and encourages prosperity and stability in the rest of the world.

Department of Veterans Affairs — www.va.gov
Offers a number of programs to further the goal of delivering high-quality services to U.S. veterans

Environmental Protection Agency — www.epa.gov
Grants information: www.epa.gov/ogd/grants/information.htm
Offers a number of grants and fellowship programs

Institute of Museum and Library Services — www.imls.gov
Primary source of federal support for the nation’s libraries and museums

National Aeronautics and Space Administration — www.nasa.gov
Grants information: http://www.nasa.gov/about/research/index.html
Partners with many groups, including college and university researchers to perform breakthrough research, develop cutting-edge technology, and incorporate them into commercially viable products

National Archives and Records Administration — www.archives.gov
Grants information: www.archives.gov/nhprc/apply/index.html
National Historical Publications and Records Commission supports a wide range of activities to preserve, publish, and encourage the use of documentary sources relating to U.S. history

National Endowment for the Arts — www.nea.gov
Grants information: www.nea.gov/grants/index.html
Largest national source of funds for the arts

National Endowment for the Humanities — www.neh.gov
Grants information: www.neh.gov/manage/index.html
Supports research, education, preservation, and public programs in the humanities

National Science Foundation — www.nsf.gov
Grants information: www.nsf.gov/awards/about.jsp
Annually funds approximately 20% of basic, federally supported college and university research

Small Business Administration — www.sba.gov
Grants information: www.sba.gov/services/financialassistance/grants/index.html
See also the SBIR/STTR programs

Social Security Administration — www.ssa.gov
Grants information: www.socialsecurity.gov/oag/grants/ssagrant.htm
Office of Acquisition and Grants supports research and demonstration efforts involving the Old-Age Survivors and Disability Insurance and the Supplemental Security Income programs

NOTE: For additional agency grants links, see www.grants.gov/applicants/tips_resources_from_grantors.jsp.
¶130.4 End-to-End Process for Grant Oversight

AIS editors

The NSF OIG’s Office of Audit identifies an awardee’s risk by using data analytics, which OA says are useful in identifying risk at all stages of a grant. For example, NSF analyzes information in its awards database, searching for selected factors known to indicate “high risk.” Once the audit risk of awardees has been assessed, OA taps into an awardee’s NSF-related accounting records. OA identifies awardee transactions that need further analysis to determine whether evidence indicates the misuse of federal funds.

The goal of this analysis is to identify, at the outset of the audit, the transactions most likely to be unallowable, unrelated to the award, or unreasonable. Knowing how NSF identifies risk could help a grantee avoid being placed in a high risk category, which could increase its chances of being audited. The chart, which follows, illustrates how NSF uses data analytics. Grantee institutions also could use the chart to identify risk with respect to subawardees throughout the lifecycle of a subaward. (For more on subawards, see ¶3700.)

Grant Oversight

Practical Tools Page 130:19

130.5 Preventing Fraud in Sponsored Research Activities

Raina Rose Tagle, Monica Modi Dalwadi, and Ashley Deihr, Baker Tilly

Imagine that you are working through a typical day, which may include answering questions from researchers on pre-award and post-award issues, reviewing costs charged to grants, and preparing sponsor reports. But in the midst of this particular day, you’re suddenly asked to join General Counsel, your supervisor, Internal Audit, and a Dean for a confidential meeting. You learn that there has been an allegation of financial research misconduct in an area where you provide support. This allegation could dramatically affect you and your workload. You may be called upon to help gather and interpret data, attend ongoing investigation and status meetings, and even implement and monitor a corrective action plan if issues are discovered. And you’re expected to do all of this on top of your normal job activities!

But wait. What if you could wind back the clock and put a stop to these issues before they occurred? Below we detail some typical areas of fraud, key warning signs of potential fraudulent activity, and what you, as a research administrator, can look for to help mitigate the risk of fraud at your institution.

Of course, it isn’t always possible to catch a fraudster before or at the beginning of a fraud scheme. For that reason, please tune in to the next NCURA Magazine issue for the second part of this two part series on fraud, entitled: “How You Can Help: Responding to Allegations of Fraud,” where we will describe the phases of a typical fraud investigation and how you can best help at each stage.

Where Fraud Can Occur in Your Institution and How You Can Help to Recognize It

One of the most important things that you can do as a research administrator is simply to be aware of some common signs of fraud. Rarely is there a masked villain or a valiant, shield-donning superhero: the perpetrators and/or the tipsters can be tough to notice. Don’t be surprised if either party is wearing a lab coat and safety goggles. And what constitutes misconduct might also not be what you’re expecting. Committing fraud doesn’t necessarily mean that perpetrators are pilfering dollars directly out of the university’s bank account. Fraudsters at your institution could be violating any one of a myriad of sponsored research regulations, such as Office of Management and Budget (OMB) Circular A-21 or Institutional Review Board requirements.

In your position, you can note potential fraud in a number of different ways. A research assistant may raise concerns with you, you may note suspicious charges coming through your office, or you may note behavioral or lifestyle changes that can be indicative of fraud. While all allegations should be considered, there are tell-tale warning signals, both behavioral and documentation-based, that can alert you to fraud at your institution. The following illustrates a continuum of potential fraud warning signs, shown from left to right as least concrete to most concrete.

As you go about your day-to-day activities, be alert for some of these signs in those around you. Some examples of each warning sign are as follows:

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1 This article is reprinted from the NCURA Magazine, January/February 2011, Volume XLIII No. 1. It is used with permission of the publisher.
Figure 130.5-1. What Fraud Is and How It Can Impact Your Institution

The term “fraud” can refer to any false representation of a matter of fact. In the research world, this can take many forms, both financial and nonfinancial. Common types of fraud in research administration and examples of each include:

<table>
<thead>
<tr>
<th>Types of Fraud</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inappropriate conflicts of interest</td>
<td>Hiring a brother as a subcontractor against policy and/or without proper disclosure</td>
</tr>
<tr>
<td>Theft</td>
<td>Permanently “borrowing” an expensive laptop from a laboratory</td>
</tr>
<tr>
<td>Embezzlement</td>
<td>Using research money to fund personal purchases</td>
</tr>
<tr>
<td>Improper use of Federal funds</td>
<td>Using money from one project to fund another project that has gone over budget</td>
</tr>
<tr>
<td>Inaccurate effort reporting</td>
<td>Claiming a researcher spent 50% of her effort on a well-funded project, when in reality she spent much of that time working on “pet projects”</td>
</tr>
<tr>
<td>Falsification of research</td>
<td>Recording incorrect data to make the research fit the thesis</td>
</tr>
</tbody>
</table>

Fraud in the research arena can result in decreased federal funding, lengthy litigation, and ruined reputations and credibility. Learning how you, as a research administrator, can help to recognize and act upon potential fraud schemes can mitigate these risks to your institution and allow you to focus on mission-critical activities.

Figure 130.5-2. Warning Signs of Fraud

- **Unusual Behavior**
  - Refusing to take vacation
  - Irritability or defensiveness
  - Complaining about the institution (e.g., inadequate pay, organizational pressure to obtain funding) to a greater extent than typical
  - Control issues or an unwillingness to share duties or information

- **Uncommon Relationships**
  - Close or personal association with a vendor or subcontractor
  - Unusually close or personal relationship with an employee
  - Close relationship with a private funding group
  - Undisclosed conflicts of interest
Motivating Factors for Fraud
◆ High personal debt
◆ Divorce or family problems

Lifestyle Changes
◆ Change in schedule (e.g., arriving early and leaving late when the individual previously worked a steady eight-hour day)
◆ Sudden alteration of or maintaining a standard of living that does not match the individual’s position (e.g., simultaneous purchases of expensive items)

Employee complaints
◆ Bullying behavior by a principal investigator
◆ Claims of unfair pay or uncompensated overtime
◆ Accusations of favoritism

Irregular or Inaccurate Documentation
The most concrete set of signs involves the documentation that you likely review in the course of your work. The following are specific areas where fraud frequently occurs, and some signals that may warn you to dig deeper:

Subcontracts, Independent Contractors, and Consultants
◆ Executed agreements without workplans, budgets, or budget justifications
◆ Large payment amounts to individuals, with or without a contract
◆ Questionable methods of payment (e.g., wiring payments, unusual billing addresses)
◆ Familial ties or other potential conflicts of interest (e.g., a researcher who subcontracts work to a biotech company he happens to invest in or own)

Procurement Cards, Procurement, and Purchasing
◆ Purchases of a personal nature
◆ Changes in spending patterns
◆ Lack of segregation of duties (e.g., a procurement cardholder is also the reviewer and approver of expenses)
◆ Lack of documentation or business support for purchases (e.g., missing receipts, copied or scanned documents, handwritten receipts)

Research Subject Payments (e.g., Petty Cash, Gift Cards)
◆ Poor documentation of research subject payments (e.g., questionable or missing receipts from subjects, payments made to individuals not otherwise documented
as part of the research)
◆ Subjects paid in cash when standard institutional practice is to pay with gift cards or vice versa
◆ Large amount of cash on hand with weak physical safeguards
◆ Petty cash box that does not match log of receipts, or that requires replenishment more frequently than normal

Travel Advances, Travel, and Expense Reimbursements
◆ Unauthorized travel or deviations in authorized travel plans
◆ Travel expenses in excess of authorized amounts
◆ Expenses or activities that violate university policy
◆ Missing, copied, or handwritten receipts
◆ Lack of segregation of duties (e.g., the individual traveling is also approving his/her travel and expense reimbursements)

Stipends, Salaries, and “Ghost” Employees (e.g., student, Part Time, and Temporary Workers)
◆ Wages paid not supported by time sheets
◆ Hours clocked in excess of agreed or approved work schedules
◆ Number of workers in excess of budget justification or scope
◆ Student employees working greater than expected number of hours
◆ Signs of inaccurate effort reporting (e.g., salary charged not commensurate with research completed per technical reports, 100% of salary charged to sponsored projects when the individual also performs teaching or administrative duties)

You may notice that certain key controls can impact several common areas of fraud. For example, requiring expenses to be well-documented will decrease the opportunity for fraud in your organization. This means that expenses should include original receipts and a clear explanation of the business purpose for the expense. Second, segregation of duties is important in many of these areas. There should be separate personnel completing tasks and performing reviews as described above. Third, conflicts of interest should be evaluated. Researchers who hire, contract to, or receive money from related parties have an inherently greater opportunity to commit fraud by inappropriately dealing with those parties. Of course, not all of these areas will apply to your job position and duties. However, being aware of the warning signs can help you to identify issues in your own job, as well as to see “the big picture” of risk areas at your institution.

No matter what warning sign or signal you see, the most important thing is to speak up when you see something. Know who within your organization you can go to with concerns (e.g., your supervisor, the Compliance Officer, or the Internal Audit department). Or, if you don’t know what else to do, consider calling your institution’s anonymous hotline with the information that you want to share. Escalating
issues early can help to prevent a lengthy, costly investigation later. It can also stem abusive or wasteful practices early on and contribute to an ethical culture.

**Conclusion**

As a research administrator, you are the first line of defense when it comes to identifying and preventing fraud in the sponsored research arena. Understanding the warning signs and key actions that you can take is extremely important to protect your institution and decrease the risk of fraud.

**About the Authors**

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Ashley Deihr is a Manager at Baker Tilly.
Investigator Financial Conflicts of Interest: What Every Good Research Administrator Should Know
Amy L. Spicer, University of Michigan Medical School

Picture this: A major NIH grant deadline is approaching and everything seems to be going smoothly, perhaps a bit too smoothly. Until...Screeching Halt! The sponsored projects office discovers that a key investigator has not disclosed his outside interests since 2011.

Or, picture this: a new industry-sponsored clinical trial is ready to open with patients waiting to enroll, but ...Screeching Halt! The PI has a financial conflict of interest (FCOI), and the IRB cannot review the human subjects research application until the COI Committee approves a conflict management plan at their next meeting...in a month! The perplexed research administrators are left wondering what to do.

Although these two scenarios might seem extreme, they are, unfortunately, not uncommon in the world of biomedical research. But do not fear, there are some things that intrepid research administrators can do to help avoid these kinds of delays. Here are some tips from the trenches:

**Disclose, disclose, disclose!**
Do you have any procrastinators in your group? Reminding investigators to maintain updated disclosures of outside activities in your institution’s disclosure system, will help to avoid a last-minute nightmare of a grant deadline crisis. If you know the potential financial conflicts of interest (FCOI) of your “frequent flyers,” you can remind them to disclose interests related to their research in the grant application and the IRB application. This will help to ensure a speedy grand submission and release of awards. We cannot say this enough, “Disclose, baby, disclose!”

Of course, this can be a challenge at large institutions where one administrator handles pre-award work, another post-award, and still another handles the IRB application. If you’re pre-award only, you may never come into contact with a conflict management plan. If you’re post-award, you may wonder what went wrong up front that is making you wait so long to get the dollars flowing to the department.

**Respond early and often.**
Occasionally, the grants office or COI office may request more information or clarification from an investigator. If they do not receive a timely response, they may ask you for help. Getting an answer from the investigator quickly will help them finish their review so that they do not hold up the research.

**Study coordinators — your first line of defense.**
Since study coordinators are often the closest to the clinical investigators and research subjects, they should be informed of any investigator FCOI on studies for which they are responsible. They should also be informed of any elements of a conflict management plan that will affect the investigator’s duties on the study.

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1 This article is reprinted from the *NCURA Magazine*, March/April 2015, Volume XVLI, No. 2. It is used with permission of the publisher.
For example, one of the most important elements of a conflict management plan prohibits the investigator from participation in the informed consent process for human subjects. On large clinical trials, more than one investigator may have a FCOI management plan, and therefore may not be allowed to consent subjects. Ensuring that your study coordinators are aware of these restrictions will help avoid possible non-compliance with a conflict management plan, forcing a situation in which subjects may need to be re-consented.

Another very important tenet of a conflict management plan is disclosure of the FCOI to human subjects in the informed consent document (ICD). Study coordinators can help ensure that the disclosure language is inserted in the ICD and that it remains there through all of the various revisions of the ICD over the course of the study. If a study coordinator inadvertently drops the disclosure language while revising the ICD, or does not understand why the disclosure language is required and thus purposely deletes it from the ICD, this could also force subjects to be re-consented. Ahhh... the power of a study coordinator.

**Know the PHS Rule.**

What is it? “Responsibility of Applicants for Promoting Objectivity in Research for which Public Health Service Funding is Sought,” 42 CFR Part 50, Subpart F, aka “the PHS Rule.” In simple terms (non-Federal-ese), this rule outlines the disclosure, training, and oversight requirements related to investigators who have an FCOI, for institutions accepting Public Health Service (PHS) funding for research. The most recent version of the rule went into effect on August 24, 2012. According to the rule, some key responsibilities for institutions are: to ensure that all investigators are trained regarding the rule; to require up-to-date outside interest disclosures for all investigators at the time of grant submission; to review all outside interest disclosures for all key investigators at the time of award; and to develop and implement a management plan for each FCOI prior to the expenditure of funds. (For more information on COI management, see Nadia Wong’s article, “Conflict of Interest: The Balance between Protecting and Encouraging Research” in the August 2014 issue of NCURA Magazine, page 64.)

Why is it important? Of course, the most important reasons for the rule are to reduce bias (or the perception of bias) in research, and to help protect the human subjects involved in the research. Other reasons to pay attention to the rule: the potential to miss a grant deadline because investigators have not made their required outside interest disclosures; the potential delay in grant funding or the start of research due to FCOI reviews or missing disclosures; and the possibility of suspension or termination of grant funding for non-compliance.

**Know your institutional policies.**

Most institutions have policies related to FCOIs available on their website or from their office of research or grants office. For example, the University of Michigan Office of Research web page has a very comprehensive list of state and federal requirements, along with University policies. It is a good idea for research administrators to be familiar with these policies and know where to get information should inves-
tigators ask. Be aware that some institutions have FCOI policies that are more restrictive than the PHS rule.

**Ask questions!**

There are many resources available for investigators or research administrators at their own institutions and beyond. If you think something does not look right, or you do not understand an FCOI issue, reach out to your grants office or COI office for help. We love spreading the word!

There are also resources available from the government, and from the Association of American Medical Colleges (AAMC). Some good websites to check out are:

- NIH Financial Conflicts of Interest and the associated Frequently Asked Questions page.
- AAMC Forum on Conflict of Interest in Academe.
- Now picture this: A major NIH grant deadline is approaching. Because of your knowledge and expertise in the FCOI arena, you’ve done your homework and your PI and all key investigators have disclosed their outside interests promptly. The COI review has been completed. Your proposal flies through the approval process and the research begins on time. Life is good...until the next deadline.

**References**


**About the Author**

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130.7  **Tackling the Administrative Burden – One Institution’s Plan**

Gary Smith, Massachusetts General Hospital; Harry Orf, Massachusetts Hospital; and Alan Robinson, UMass Amherst

Listening to their research “customers” is something every research support department should do well. It is especially important in an environment of ever-increasing regulation and bureaucracy. Yet few research support departments have implemented formal programs to gather and implement process improvement ideas from the people they serve. This article describes one institution’s approach to better support its research enterprise by becoming an idea-driven organization.

**Don’t Just Blame the Sponsor**

“If Bob thinks everyone else is the problem, Bob’s usually the problem”

*The Bob Principle*

It’s easy to blame outside regulations for all of our inefficient processes, but a closer look reveals that many problems start from within. For example, new conflict of interest regulations require investigators to disclose potential financial conflicts, but do the regulations require institutions to set up electronic systems that require investigators to click “no” more than 100 times just to indicate that they don’t have a conflict? We can all agree that new vendors servicing our organizations need to be vetted and approved, but do we need vendors to complete a 26 page form where much of the information requested is not applicable to the research side of the business? Do new research fellows that do not interact with patients need to go through the same rigorous credentialing process that is required for new physicians?

We are all familiar with the recent Federal Demonstration Project (FDP) survey that found investigators spend 42% of their time on administrative activities. How much of this burden is created by our own institutions as a result of setting up inefficient processes that are onerous or confusing to the end-user? How often do organizations look at their existing policies and processes to see if they have become outdated or could be streamlined? As a matter of fact, a recent report by the National Science Board on reducing the administrative burden for investigators, found that 77% of those that responded to a request for information to the NSB Task Force created to study this issue, perceived their institution as a source of the administrative burden.1

**Controlling our Destiny**

Massachusetts General Hospital (MGH) is no different than other academic institutions – our investigators and support staff believe they spend too much valuable time on administrative activities. While sponsor regulations to ensure public trust in the research we conduct are extremely important and needed, have we created the most efficient processes to manage our research enterprise? From the perspective of our research customers, the answer is clearly “no.”

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1This article is reprinted from *NCURA Magazine*, Volume XVLI, October / November 2014, No. 5. It is used with permission of the publisher.
The research leadership at MGH recognized the frustration within our research community and decided to take the bold step of looking within for a solution. We realized that organizations like FDP and Council on Governmental Relations were already partnering with our federal sponsors to reduce administrative burdens at a policy level. It was time to stop worrying about things we did not control and change the things we could. Our response was to create an “Idea-Driven Organization.”

**What is an Idea-Driven Organization?**

Many of us are familiar with the terms “Six Sigma,” “the Toyota Way,” or “Lean.” These tools, which got their start in the manufacturing industry, are focused on improving organizational efficiency. Their general principle is to quantitatively analyze each step in a process, identify waste, and implement improvements. While effective, this method is often top-down and driven by management and, consequently, does not take into account small ideas that, collectively, can lead to big impacts within an organization.

The central concept of an idea-driven organization is that the front-line employees see a great deal of problems and opportunities that their managers don’t. They are full of ideas to save time and/or money and to improve productivity, quality, and the customer experience. An idea-driven organization is designed and led to systematically seek and implement large numbers of ideas from everyone, but particularly from the people on the front line.2

**MGH Continuous Research Operations Improvement (CROI)**

In 2012, MGH Research took the first step to become an idea-driven organization. We rolled out a Continuous Research Operations Improvement (CROI) program based on the principles in two books; “Ideas are Free” and the “Idea-Driven Organization” by Alan G. Robinson and Dean M. Schroeder. CROI is driven by our “Prime Directive” (thank you Star Trek): Focus on the researcher. *Further the research mission and bring value to it. Maximize the researcher’s time at the bench by eliminating or maximizing the efficiency of their ancillary obligations.*

All employees who see a problem or opportunity for improvement can submit an idea/suggestion by email or phone. The ideas/suggestions are registered into an electronic tracking system and then triaged to one of 15 working groups (see chart) based on the type of suggestion. Each working group is co-led by an investigator and an administrator. The group is then charged with vetting suggestions, recommending and implementing solutions.

Transparency and open communication to both the suggester and entire research community are keys to the success of the program. Suggesters receive an initial email when their idea has been assigned to a working group, and again every time their suggestion has a change in status. A website visible to all employees displays all suggestions and their current status.
Results and Successes

Since the roll out of CROI, we have received almost 400 suggestions; 148 have been resolved (implemented), 65 were closed (no change made), and 178 are open and currently being discussed by working groups. Figure 320.7-1 shows the break out of suggestions by working group and their current status:

![Figure 320.7-1](image)

<table>
<thead>
<tr>
<th>Working Group</th>
<th>Submitted</th>
<th>Open</th>
<th>Resolved</th>
<th>Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal Care</td>
<td>46</td>
<td>23</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td>Central Data</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Clinical Research</td>
<td>76</td>
<td>61</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Communications</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Compliance</td>
<td>7</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Grant Tracking</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Human Resources</td>
<td>21</td>
<td>6</td>
<td>11</td>
<td>4</td>
</tr>
<tr>
<td>Internet</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Intranet</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>IT Infrastructure</td>
<td>28</td>
<td>6</td>
<td>21</td>
<td>1</td>
</tr>
<tr>
<td>Materials Management</td>
<td>57</td>
<td>15</td>
<td>18</td>
<td>24</td>
</tr>
<tr>
<td>Research Management</td>
<td>83</td>
<td>33</td>
<td>28</td>
<td>22</td>
</tr>
<tr>
<td>RVL</td>
<td>10</td>
<td>8</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Safety</td>
<td>11</td>
<td>3</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Space and Facilities</td>
<td>35</td>
<td>10</td>
<td>23</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>392</td>
<td>178</td>
<td>148</td>
<td>65</td>
</tr>
</tbody>
</table>

The following are examples of a few ideas that have been implemented (resolved) to date.

◆ Our electronic conflict of interest system required investigators with no conflicts to repeatedly answer numerous non-applicable questions. A simple enhancement to our system allows these types of questions to be skipped, collectively saving hundreds of hours of researchers’ time.

◆ The electronic grant submission system would time out without warning causing instances where unsaved information would be lost. A “time out warning” feature was added, saving 2-3 hours of re-entry work per instance.

◆ The MGH Research Intranet, which was only available inside the firewall, did not allow employee access to valuable institutional information when not at work. The Intranet is now securely available outside the firewall, giving employees greater flexibility to work outside the hospital.

◆ The IS HelpDesk phone number was not included in email correspondence to employees requesting IT support, even though the automated email asks people to call the HelpDesk if they have further questions. We were able to track an example of an investigator trying to locate the number for over an hour. The phone number is now listed in automated email correspondence, saving
thousands of hours of employees’ time.

**Lessons Learned and Moving Forward**

Has our implementation of CROI been perfect? Certainly not. But we are proud of the steps we have taken to move MGH research towards becoming an idea-driven organization. The program has improved accountability, helped restore trust between the research community and those who serve it, and created a forum for open and honest dialogue about the issues that frustrate us and impede research. It was a bold step, and to be honest, has not been easy. There is still work to be done. Just like the title of our program suggests, we will “continuously” reassess and improve our CROI program. We have asked our research community to help us better the program through retreats and brain-storming sessions. We’ve even brought in an expert from the outside, who also graciously agreed to co-author this article, to evaluate and give recommendations for improving our program.

We have already acted on some suggestions and plan on implementing others in the coming months. Some of these key suggestions and recommendations for moving forward include:

◆ Gain senior leadership buy-in across MGH and our healthcare system (Partners). This buy-in is the most critical element for program sustainability and success

◆ Foster a culture of change. Everyone needs to realize that continuously improving our organization is part of their everyday job

◆ Establish a better process to prioritize ideas. All ideas must be vetted but not all can or should be implemented

◆ Train and educate. Senior leadership must understand the importance of CROI, the research community must continuously identify opportunities for improvement, and our support and management staff must learn how to efficiently implement solutions

**Take the Plunge – Become an Idea-Driven Organization**

If you have not already done so, we challenge you to consider becoming an idea-driven organization, or if you are a department administrator, becoming an idea-driven department. Research administration is a service business and all service businesses have customers. The best businesses listen to their customers and work with them to improve service and the customer experience. We should do no less for our researchers. It’s not the easy thing to do, but it is the right thing to do. It brings researchers together with those who support them to improve the work environment, increase efficiency, and contribute in a very tangible way to advance science.

**References**


About the Authors

Gary Smith is the Sr. Administrative Director for Research at Massachusetts General Hospital. Gary has been in research administration for over 25 years and involved with NCURA for many of those years. His past service includes Chair and Treasurer of Region I. Gary is happy to speak with anyone wishing to learn more about the MGH CROI program. He can be reached at smith.gary@mgh.harvard.edu

Harry W. Orf, PhD is the Sr. Vice President for Research at Massachusetts Hospital. He has had a 35-year career in science and administration, including scientific research, research administration, teaching and education outreach, and biotechnology start-ups. He can be reached at horf@mgh.harvard.edu

Alan Robinson, PhD is a professor at the Isenberg School of Management at UMass Amherst and an expert in corporate creativity and managing ideas within organizations. He co-authored the books “Ideas are Free” and the “Idea-Driven Organization”. He can be reached at agr@isenberg.umass.edu
Research Administration: Strategies and Recommendations
Randi Wasik, Washington State University

Some of us did not set out on a straight path to hold the positions we now have. Rather, it has been an adventure with a myriad of twists and turns which while at times painful, have been essential to our current positions. I myself have moved from a bachelor’s degree in performance, to a MBA to an in-process master’s in Education. I have (and still do) play music, teach and use my business training. In reflecting on my life’s journey thus far for this article, there are two overarching themes. The first is stay dynamic and learn from all experiences and people you encounter. The second is to be passionate in the profession you have chosen. As Steve Jobs said: “Your work is going to fill a large part of your life, and the only way to be truly satisfied is to do what you believe is magnificent work. And the only way to do great work is to love what you do.” I love what I do, I am inspired by those I work with and I feel truly blest to be a part of the world of research.

Research administration is truly an exciting and dynamic career which when fully embraced will lend itself to an exciting and fulfilling work life. It takes a diverse toolbox to successfully partner and navigate the administrative side of this book of business at our institutions. Here are some suggestions on what to have in your toolbox to be successful.

Understand, appreciate and embrace the roles and responsibilities of the distinct aspects of research administration – it takes a village. An administrator at the department level will have to be a jack of all trades and is a partner in the trenches. We are the partner or facilitator supporting our faculty as well as the bridge to leadership both locally, centrally and sometimes with our sponsors. Our faculty (aka Principal Investigator) are responsible for the research. They are our incredibly creative people who are our partner/customer. There are supervisors/managers at the departmental/college/school level whose role is should be to teach, mediator and mentor. The supervisor can be our faculty or an institutional official depending on our role. Institutional officials are responsible for ensuring compliance and are a partner to the administrator and faculty. Within each of these components of the team there are a variety of talents which will fold in and out of the support team based on the research need. We need to not only understand each of the players, but also appreciate and involve one another to ensure success. Throughout your career, I strongly encourage you to experience both department and central roles.

Once you know the players, the next important skill is communication. I cannot stress enough the importance of communication in all its forms – written, verbal, physical and silent. Be present every day and in every conversation. I advise staff to pay attention to the full conversation: what is said, how it is said, the physical presence and what is not said. When someone comes into your office, stop typing or hang up the phone and physically turn to the person in front of you. This is a sign of respect, curtesy and that you are present with them. Understand the roles and responsibilities of those with whom you are communicating. For example, in advising the preparation of standard reports, I work with each person on the
physical report being the same for all, but adjusting the conversation on the report content to match the audience you are working with. When conversations derail, recognize the derailment, and then get back on track. This can be accomplished by setting expectations at the start of a meeting (agenda) and recognizing the need for follow-up discussions. When heading into a crucial conversation, take the time to define the roles of those involved in a conversation – who will be the good cop and who will be the bad cop for instance. Finally, do not be afraid to put a conversation on hold and come back to it after the parties involved have had time to reflect, digest, regroup, or to get the right players at the table.

In support of effective communication, you must maintain clear documentation. Strive to create documentation in a way that is intuitive. Take the time to build a shared understanding with your team for your file architecture – both physical and digital. Know your institution’s policies are on records retention, if at a state institution understand your state’s public records policy and so on. Be consistent both in maintenance and accessibility as well as sharing of your records as related to your role. For example, if you manage post award operations, you should reconcile and report out monthly. Do not over document and when compliant, delete records which you no longer need.

Manage your workspace. Organize by tasks/actions. Create areas around workflows such as proposals/pending agreements to follow-up to award establishment to post award to closing. Use a system that works for you whether that is compartmentalizing your workspace physically or digitally, using alpha-numeric identifications, color coding, etc. If a task is pending, keep it visible. Remember out of sight does mean out of mind. Set up a standard time for housekeeping. I go through my pending emails every Monday and Friday religiously. Simultaneously I set-up files for the week’s meetings to ensure I am on time and present in the week’s meetings.

Time management is an essential component of career success. Our electronic calendars can be powerful tools as well as hold notes and remind us who was at a meeting. Set time not only for meetings with others, but also yourself. When you set time for yourself include a subject line and stick to these meetings just as you adhere to meetings with others. Prioritize – not only for yourself but also for others who you are meeting with (respect each other’s time). Don’t be afraid to recognize if you are in the middle of a task/priority and ask if the request can be discussed at another time and/or offer to set-up a meeting if you cannot give the other person your full attention. When time is up, push back from the table, get up, or politely bring the discussion to an end. Appropriate time management respects you and as well as all on your team and/or your support network.

Build your network. My most valuable resource are the partners in my current institution, at my past institutions and through NCURA. Anytime I have started in a new position, I spend a good portion of the first few months asking who is in all the areas which impact my work and then go meet them in person. Then I ask them who else I should meet with – I know two friends, who know two friends and so on. I meet peers and those I support in their workspace. This makes the person you are meeting with comfortable and in the case of a lab for instance, if you ask for
a tour, it shows partnership. I stay in contact with past co-workers as much as possible. I mentor as this stretches me and builds my network. Most importantly, I use NCURA. Throughout my career NCURA has served as my most valuable resource and support net.

**Continue to grow.** Depending on your institution, you may have a professional development group, a chance to take courses either at your institution or at local community college. Take advantage of these opportunities – regularly. Ask to be on committees. Don’t sit back a be at the effect of change – be the change – shape your world and be a dynamic partner for development and growth. Belong to a professional organization, go to meetings, meet people and reach out. Volunteer at your institution, with your professional organization and in your community. As I said at the start, the faculty we support are dynamic and creative therefore you must stay equally as dynamic and accepting of the challenges and changes we face daily. In short, stay active in your profession.

**Reach out/get up. Don’t be an island.** This can lead not only to a less than collegial work environment, but can also lead to a very myopic career. I fully appreciate for some it is hard to put yourself out there, but in doing so whether it is at the institution, in your community, or through your professional organization, you will be the one who grows and benefits the most.

**Stay flexible and realistic.** The most common answer to a question in research administration is “it depends.” The trick we all face daily is to understand the guidance we are under and where we can push the envelope and be that creative partner to our faculty while keeping all of us compliant. Communication, professional development and partnerships will be essential when navigating needs/conversations in a manner that is open, flexible, but realistic.

**Remember those Sesame Street/Mr. Rogers adages.** Say “please”, “excuse me” and “thank you.” Treat everyone with respect – treat others as you would like to be treated. Know when to stay and when to walk away – let it go. To gain respect, show respect. Recognize the accomplishments of others and do not look for praise for yourself. It is not about the me, but rather about the we. Always ask yourself, am I living to work or working to live – hopefully it is always the later. Your time is valuable so give yourself fully, but only when you are fully appreciated.

I truly love what I do and am grateful for the life I have. I have met some amazing people and worked on teams where the unbelievable has become believable. I fluidly move between all the tools mentioned above daily to be the strategic partner to my faculty, organization and team to ensure success not only for them, but also for me both care wise as well as personally. A closing thought from Patanjali:

> “When you are inspired by some great purpose, some extraordinary project, all your thoughts break their bonds; Your mind transcends limitations, your consciousness expands in every direction, and you find yourself in a new, great and wonderful world. Dormant forces, faculties and talents become alive, and you discover yourself to be A greater person by far than you ever dreamed yourself to be.”
About the Author

Randi Wasik, MBA, is the Associate Dean for Finance, Administration and Strategy at Washington State University’s Ellison Floyd College of Medicine. Randi has worked at both public as well as private institutions in roles ranging from departmental to central appointments. She has served on certificate trainings at two institutions and actively taught at these institutions as well as for NCURA at both the regional as well as national levels. She is a graduate of the NCURA Leadership Development Institute program. Currently she is the Treasurer Elect for Region VI. With a BFA, she still plays locally as well as enjoying gardening, cooking and collecting antiques. She can be reached at randi.wasik@wsu.edu
Statistics and Survey Results

This section includes statistics and survey results from authoritative sources relating to topics of general relevance to sponsored research administration.

Federal Support to Higher Education Institutions

One way to gauge the growth in sponsored research administration is to look at the growth in and current dollars going to federal research funding at colleges and universities. Statistics from the National Science Foundation’s (NSF) “Survey of Federal Science and Engineering Support to Universities, Colleges and Nonprofit Institutions,” published annually, provide a helpful snapshot of federal sponsorship of science and engineering. NSF, under its mandate, collects statistical data from the 18 federal agencies that account for “virtually all” federal support for science and engineering at educational institutions (for a listing of the agencies, see Figure 160.1-3). Overall, institutions of higher education perform about 50 percent of the “Nation’s basic research.” Some key data from this survey are included at Figures 160.1-1, 160.1-2, and 160.1-3. (All figures will be updated regularly.)

Trend Data. Recent statistics from NSF show that federal agencies obligated a new high in current dollars of $25.3 billion to academic institutions for science and engineering (S&E) activities in FY 2007. This amount represents a slight (0.1%) decrease in current dollars from FY 2006, and it represents a 2.7% decrease in inflation-adjusted constant 2000 dollars over the FY 2006 level (see Figure 160.1-1).
Figure 160.1-1: Federal Funds for Science and Engineering Awarded to Universities and Colleges, FYs 1963–2007

Statistics and Survey Results

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Figure 160.1-2: Federal Funds for Science and Engineering Awarded to the
Top 100 Universities and Colleges, Ranked by the Total Amount
Received in FY 2007 and Shown for FYs 2000-2007
(Dollars in thousands)
Rank

Institution
All institutions

2000

2001

2002

2003

2004

2005

2006

2007

19,877,232

22,491,561

24,430,674

26,659,692

27,338,022

28,381,213

28,634,346

28,519,932

1

Johns Hopkins U., The

933,245

992,324

1,136,498

1,137,366

1,271,778

1,233,948

1,337,827

1,294,051

2

U. WA

444,625

527,423

576,735

631,144

653,967

663,340

676,567

664,826

3

U. MI all campuses

377,574

435,157

456,825

520,754

519,600

516,408

565,399

549,728

4

U. PA

373,963

438,186

479,852

495,264

534,038

558,151

532,800

536,396

5

U. CA, Los Angeles

398,565

389,906

439,766

475,651

498,245

525,450

505,938

515,000

6

Duke U.

245,017

288,888

355,278

412,069

415,102

459,165

496,451

495,828

7

U. CA, San Diego

357,629

394,480

408,739

466,450

463,955

428,553

445,511

477,222

8

U. CA, San Francisco

314,973

371,124

386,918

393,078

423,585

473,518

466,350

470,405

9

Harvard U.

330,683

352,230

356,534

384,891

424,737

442,119

450,024

466,816

10

Stanford U.

377,918

369,715

409,122

467,153

507,877

485,552

491,617

460,625

    
11

Columbia U. in City of N.Y.

318,845

348,388

372,920

412,694

406,085

456,126

503,324

451,460

12

U. Pittsburgh all campuses

261,984

312,428

351,409

394,701

394,591

427,071

443,955

448,269

13

Washington U. St. Louis

303,684

331,560

381,484

419,014

407,282

428,109

434,013

438,079

14

U. WI Madison

303,126

331,954

393,625

422,125

470,137

476,865

473,638

433,159

15

Yale U.

279,540

295,710

334,392

349,560

371,476

384,420

390,197

417,835

16

U. MN all campuses

309,632

310,687

326,526

345,802

365,623

362,415

370,262

413,176

17

MA Institute of Technology

269,030

282,091

291,012

291,879

354,073

359,771

423,893

400,337

18

PA State U. all campuses

264,262

283,260

317,795

345,920

358,558

304,552

334,148

384,006

19

U. NC Chapel Hill

254,736

299,905

329,046

344,601

343,943

363,060

374,542

382,264

Cornell U. all campuses

271,564

314,491

327,452

334,108

371,062

360,549

332,385

372,742

20

    
21

U. CO all campuses

313,195

331,201

358,439

367,867

386,349

367,595

371,871

363,235

22

Vanderbilt U.

151,449

182,469

236,272

263,812

287,178

303,357

334,302

353,539

23

Case Western Reserve U.

188,829

211,871

224,186

207,734

256,826

303,267

290,365

289,746

24

Northwestern U.

162,832

175,962

187,112

213,558

231,640

230,477

240,766

272,640

25

U. Southern CA

215,200

245,169

268,151

279,442

297,365

323,958

275,999

271,131

26

U. IL Urbana-Champaign

189,713

238,308

220,124

242,985

230,697

209,604

213,946

270,675

27

U. CA, Davis

173,483

188,248

207,525

212,718

231,373

238,791

257,281

269,980

28

U. Chicago

157,500

173,911

177,002

208,139

223,870

246,241

236,915

268,322

29

U. Rochester

161,689

181,153

203,199

228,985

249,468

261,637

267,323

267,071

30

Emory U.

159,705

170,484

192,490

214,970

226,984

240,287

241,448

261,996

31

U. CA, Berkeley

223,085

241,142

222,117

245,570

268,323

270,571

254,685

251,857

32

U. AL Birmingham, The

196,225

225,061

240,043

253,617

237,192

254,332

255,985

251,394

33

OH State U. all campuses

162,313

180,225

197,226

214,200

229,574

246,718

237,254

246,021

34

Baylor C. of Medicine

197,295

272,941

304,594

297,252

264,888

262,968

252,729

239,994

35

U. AZ

181,579

183,375

186,735

206,670

230,246

221,002

228,658

238,471

36

U. CA, Irvine

102,447

120,203

146,319

151,085

168,151

177,856

172,908

227,497

    

continued

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January 2010


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Chapter 100 • Overview of Sponsored Research Administration

Figure 160.1-2 (continued)
37

U. IA

148,421

176,493

191,577

188,861

195,419

197,454

207,983

223,184

38

Mt. Sinai School of Medicine

123,679

139,919

153,691

170,932

164,731

195,760

194,275

220,711

39

Boston U.

147,263

166,720

194,516

347,152

221,196

212,981

229,510

218,190

U. VA all campuses

133,785

165,098

175,327

185,567

204,421

201,945

191,118

214,129

40

    
41

U. MD Baltimore

42

U. FL

99,000

110,281

130,065

136,203

158,657

190,578

184,084

210,472

150,337

173,582

186,122

195,296

204,600

218,908

204,550

208,155

43

GA Inst. of Tech. all
campuses

73,176

118,923

145,878

144,564

126,549

170,805

175,632

206,757

44
45

OR Health & Science U.

118,455

148,197

167,125

176,319

181,144

192,916

203,155

200,394

Scripps Research Institute

142,016

161,562

193,613

209,937

229,115

254,235

221,678

199,031

46

U. TX Southwestern Medical
Ctr. Dallas

126,389

152,320

170,211

182,142

177,520

178,233

180,796

198,303

47

NY U.

136,888

144,945

154,130

173,449

165,860

192,825

182,863

194,755

48

U. IL Chicago

111,829

137,062

146,861

156,138

164,479

172,668

182,528

188,891

49

IN U. all campuses

133,788

156,076

159,434

173,181

180,500

181,053

177,338

179,673

50

U. UT

133,033

157,007

171,192

182,199

177,469

163,902

179,136

177,273

51

U. TX M.D. Anderson Cancer
Ctr.

92,691

113,381

134,717

143,054

160,091

160,687

169,091

171,339

52

U. TX Austin

159,849

195,885

174,418

206,247

187,523

144,540

170,595

168,155

53

CA Institute of Technology

150,366

154,021

165,436

164,054

166,820

171,812

165,014

167,521

54

MI State U.

114,848

124,955

118,011

155,587

142,987

166,932

148,788

161,531

55

U. MD College Park

139,673

150,543

148,546

142,268

123,536

140,168

151,135

154,521

56

Rutgers, all campuses

105,843

113,197

124,739

140,721

129,443

134,400

150,820

149,397

57

Purdue U. all campuses

107,299

105,495

116,475

126,788

136,407

139,660

144,318

148,802

58

U. Miami

125,383

124,005

137,305

138,941

149,231

136,847

127,767

147,292

59

U. KY all campuses

103,344

113,057

131,771

129,790

143,130

151,355

147,748

141,802

60

Yeshiva U.

115,841

123,301

137,942

156,637

172,907

160,165

146,850

136,160

61

Carnegie Mellon U.

95,881

101,946

136,948

116,405

120,775

112,469

98,068

133,263

62

U. MA Worcester

77,743

85,142

95,159

102,594

107,341

124,465

112,002

127,217

63

U. Cincinnati all campuses

83,383

93,729

111,845

112,417

117,691

122,128

118,096

126,175

64

U. NM all campuses

92,780

97,728

97,409

93,757

93,822

111,387

108,768

119,144

65

U. HI Manoa

84,431

104,768

125,182

111,389

107,840

121,124

133,730

118,241

66

Wake Forest U.

77,267

100,052

112,715

122,656

114,810

132,547

125,828

117,468

67

U. KS all campuses

69,527

78,741

87,086

97,653

96,350

98,251

102,952

116,836

68

Princeton U.

94,086

93,553

98,889

107,933

108,486

117,207

128,665

116,575

69

U. CT all campuses

73,292

89,193

100,130

119,729

118,264

123,855

117,872

113,880

70

AZ State U. all campuses

49,662

61,523

88,273

72,483

94,460

95,008

99,719

112,835

71

NC State U.

90,745

107,149

88,629

101,444

114,312

107,061

115,002

110,598

72

CO State U.

84,728

100,179

98,409

119,497

115,158

129,641

118,065

110,432

75

U. TX Health Science Ctr.
San Antonio

77,731

84,401

84,319

91,787

93,165

88,801

89,883

108,191

76

VA Polytech Inst & State U

69,710

72,527

79,395

71,843

88,671

106,899

79,505

107,010

77

Woods Hole Ocean. Inst.

76,935

78,001

75,502

83,699

89,346

89,263

88,270

105,292

78

U. MO-Columbia

98,332

102,209

91,908

108,140

92,433

100,263

110,190

105,157

January 2010

Sponsored Research Administration


### Figure 160.1-2 (continued)

<table>
<thead>
<tr>
<th>Institution</th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
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</thead>
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<td>Dartmouth C.</td>
<td>69,694</td>
<td>83,775</td>
<td>101,002</td>
<td>110,238</td>
<td>109,615</td>
<td>110,844</td>
<td>105,876</td>
<td>103,949</td>
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<tr>
<td>U. TX Medical Branch</td>
<td>66,512</td>
<td>73,306</td>
<td>85,246</td>
<td>208,286</td>
<td>102,882</td>
<td>117,598</td>
<td>115,283</td>
<td>103,678</td>
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<tr>
<td>SUNY Stony Brook all campuses</td>
<td>89,734</td>
<td>105,499</td>
<td>92,660</td>
<td>107,534</td>
<td>110,260</td>
<td>104,166</td>
<td>104,299</td>
<td>103,156</td>
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<tr>
<td>U. CA, Santa Barbara</td>
<td>75,745</td>
<td>78,498</td>
<td>89,389</td>
<td>98,577</td>
<td>104,764</td>
<td>100,674</td>
<td>103,484</td>
<td>102,903</td>
</tr>
<tr>
<td>U. TX Health Sci Ctr. Houston</td>
<td>88,990</td>
<td>104,113</td>
<td>101,412</td>
<td>101,305</td>
<td>101,427</td>
<td>128,556</td>
<td>103,979</td>
<td>102,112</td>
</tr>
<tr>
<td>U. GA</td>
<td>82,911</td>
<td>95,623</td>
<td>94,408</td>
<td>100,223</td>
<td>103,040</td>
<td>98,760</td>
<td>90,386</td>
<td>100,075</td>
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<tr>
<td>Brown U.</td>
<td>62,581</td>
<td>69,115</td>
<td>81,142</td>
<td>94,196</td>
<td>88,555</td>
<td>83,338</td>
<td>95,467</td>
<td>99,990</td>
</tr>
<tr>
<td>Georgetown U.</td>
<td>91,160</td>
<td>94,586</td>
<td>75,032</td>
<td>84,410</td>
<td>90,124</td>
<td>103,019</td>
<td>101,871</td>
<td>99,213</td>
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<tr>
<td>Medical C. WI</td>
<td>69,561</td>
<td>77,326</td>
<td>83,567</td>
<td>99,976</td>
<td>93,834</td>
<td>86,713</td>
<td>88,343</td>
<td>99,111</td>
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<tr>
<td>Medical U. SC</td>
<td>63,745</td>
<td>74,316</td>
<td>91,109</td>
<td>111,003</td>
<td>106,229</td>
<td>117,018</td>
<td>95,866</td>
<td>97,224</td>
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<tr>
<td>Columbia U. central office</td>
<td>3,453</td>
<td>7,334</td>
<td>5,063</td>
<td>9,066</td>
<td>23,323</td>
<td>4,005</td>
<td>63,011</td>
<td>97,151</td>
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<tr>
<td>Wayne State U.</td>
<td>78,815</td>
<td>92,839</td>
<td>104,264</td>
<td>98,738</td>
<td>102,162</td>
<td>95,550</td>
<td>86,676</td>
<td>94,543</td>
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<tr>
<td>IA State U.</td>
<td>69,893</td>
<td>90,441</td>
<td>84,290</td>
<td>95,811</td>
<td>105,749</td>
<td>109,104</td>
<td>99,587</td>
<td>93,030</td>
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<td>UT State U.</td>
<td>56,736</td>
<td>41,357</td>
<td>72,881</td>
<td>90,670</td>
<td>72,442</td>
<td>69,817</td>
<td>78,564</td>
<td>92,858</td>
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<tr>
<td>OR State U</td>
<td>81,357</td>
<td>91,975</td>
<td>81,205</td>
<td>95,758</td>
<td>97,024</td>
<td>97,376</td>
<td>95,768</td>
<td>90,313</td>
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<td>U. TN Knoxville</td>
<td>47,976</td>
<td>54,647</td>
<td>51,606</td>
<td>59,753</td>
<td>66,585</td>
<td>65,509</td>
<td>55,212</td>
<td>89,521</td>
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<tr>
<td>Tulane U.</td>
<td>39,436</td>
<td>47,751</td>
<td>66,317</td>
<td>88,066</td>
<td>82,033</td>
<td>86,752</td>
<td>94,099</td>
<td>88,667</td>
</tr>
<tr>
<td>U. MA Amherst</td>
<td>52,765</td>
<td>66,459</td>
<td>62,794</td>
<td>79,849</td>
<td>68,530</td>
<td>72,379</td>
<td>80,974</td>
<td>86,789</td>
</tr>
<tr>
<td>Tufts U.</td>
<td>51,587</td>
<td>52,712</td>
<td>62,665</td>
<td>73,218</td>
<td>79,897</td>
<td>88,094</td>
<td>98,701</td>
<td>86,282</td>
</tr>
<tr>
<td>U. VT</td>
<td>64,370</td>
<td>74,679</td>
<td>79,527</td>
<td>91,116</td>
<td>89,177</td>
<td>90,240</td>
<td>88,675</td>
<td>85,516</td>
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<tr>
<td>U. DE</td>
<td>51,031</td>
<td>50,147</td>
<td>59,446</td>
<td>73,043</td>
<td>64,286</td>
<td>72,017</td>
<td>77,799</td>
<td>82,906</td>
</tr>
<tr>
<td>FL State U.</td>
<td>55,071</td>
<td>52,520</td>
<td>67,664</td>
<td>79,963</td>
<td>68,391</td>
<td>78,371</td>
<td>82,361</td>
<td>82,445</td>
</tr>
</tbody>
</table>

## Figure 160.1-3: Federal Funds for Science and Engineering Awarded to Universities and Colleges, by Agency: FY 2007

<table>
<thead>
<tr>
<th>Agency</th>
<th>All Federal Obligations</th>
<th>Total R &amp; D</th>
</tr>
</thead>
<tbody>
<tr>
<td>All agencies</td>
<td>28,519,932</td>
<td>25,335,978</td>
</tr>
<tr>
<td>Department of Agriculture</td>
<td>1,252,672</td>
<td>732,196</td>
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<tr>
<td>Department of Commerce</td>
<td>339,942</td>
<td>211,348</td>
</tr>
<tr>
<td>Department of Defense</td>
<td>3,157,565</td>
<td>2,982,579</td>
</tr>
<tr>
<td>Department of the Air Force</td>
<td>526,485</td>
<td>481,225</td>
</tr>
<tr>
<td>Department of the Army</td>
<td>1,045,566</td>
<td>1,000,357</td>
</tr>
<tr>
<td>Department of the Navy</td>
<td>1,303,420</td>
<td>1,220,922</td>
</tr>
<tr>
<td>Other Department of Defense</td>
<td>282,094</td>
<td>280,075</td>
</tr>
<tr>
<td>Department of Education</td>
<td>268,917</td>
<td>126,327</td>
</tr>
<tr>
<td>Department of Energy</td>
<td>814,271</td>
<td>812,131</td>
</tr>
<tr>
<td>Department of Health and Human Services</td>
<td>17,527,222</td>
<td>16,259,892</td>
</tr>
<tr>
<td>Administration for Children and Families</td>
<td>9,275</td>
<td>9,275</td>
</tr>
<tr>
<td>Agency for Healthcare Research and Quality</td>
<td>71,803</td>
<td>71,739</td>
</tr>
<tr>
<td>Agency for Toxic Substances and Disease Registry</td>
<td>2,197</td>
<td>1,148</td>
</tr>
<tr>
<td>Centers for Disease Control and Prevention</td>
<td>513,262</td>
<td>227,146</td>
</tr>
<tr>
<td>Centers for Medicare &amp; Medicaid Services</td>
<td>8,147</td>
<td>8,147</td>
</tr>
<tr>
<td>Food and Drug Administration</td>
<td>16,017</td>
<td>9,017</td>
</tr>
<tr>
<td>Health Resources and Services Adm.</td>
<td>246,590</td>
<td>138,004</td>
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<tr>
<td>Indian Health Service</td>
<td>1,774</td>
<td>0</td>
</tr>
<tr>
<td>National Institutes of Health</td>
<td>16,646,582</td>
<td>15,783,841</td>
</tr>
<tr>
<td>Office of the Assistant Secretary, Planning &amp; Evaluation</td>
<td>3,441</td>
<td>3,441</td>
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<tr>
<td>Substance Abuse and Mental Health Serv. Admin.</td>
<td>8,134</td>
<td>8,134</td>
</tr>
<tr>
<td>Department of Homeland Security</td>
<td>33,227</td>
<td>29,668</td>
</tr>
<tr>
<td>Directorate for Science and Technology</td>
<td>32,582</td>
<td>29,593</td>
</tr>
<tr>
<td>U.S. Coast Guard</td>
<td>645</td>
<td>75</td>
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<tr>
<td>Department of Housing and Urban Development</td>
<td>399</td>
<td>399</td>
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<tr>
<td>Department of the Interior</td>
<td>89,027</td>
<td>86,074</td>
</tr>
<tr>
<td>Department of Labor</td>
<td>31,332</td>
<td>31,312</td>
</tr>
<tr>
<td>Department of Transportation</td>
<td>105,757</td>
<td>96,010</td>
</tr>
<tr>
<td>Other agencies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agency for International Development</td>
<td>29,883</td>
<td>29,883</td>
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<tr>
<td>Appalachian Regional Commission</td>
<td>204</td>
<td>204</td>
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<tr>
<td>Environmental Protection Agency</td>
<td>91,138</td>
<td>85,409</td>
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<tr>
<td>National Aeronautics and Space Administration</td>
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<td>552,963</td>
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<tr>
<td>National Science Foundation</td>
<td>4,209,787</td>
<td>3,286,003</td>
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<tr>
<td>Nuclear Regulatory Commission</td>
<td>3,115</td>
<td>3,115</td>
</tr>
<tr>
<td>Office of Justice Programs</td>
<td>6,462</td>
<td>6,333</td>
</tr>
<tr>
<td>Social Security Administration</td>
<td>6,049</td>
<td>4,132</td>
</tr>
</tbody>
</table>

¶160.2  **Growth of Sponsored Research Administration as a Profession**  

The number of sponsored research administrators has increased concomitantly with the growth in and complexity of requirements surrounding federal sponsorship of research conducted at colleges and universities. (See ¶160.1.) Although verifiable data on the number of sponsored research professionals are hard to come by, Figure 160.2-1 illustrates the growth of sponsored research professionals by providing a snapshot of the growth trend in membership of the National Council of University Research Administrators (NCURA).

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**Figure 160.2-1: Growth of NCURA Membership, 1959–2008**

![Graph showing growth of NCURA membership from 1959 to 2008.](Image)

160.3  R&D Expenditures by Higher Education Institutions
AIS editors

Although representing the lion’s share of sponsored funding to institutions of higher education — over 60 percent in FY 2007 — federal funds to colleges and universities in support of research and development (R&D) is not the only source of funds for such activities.

Every year the National Science Foundation (NSF) asks universities and colleges to report their separately budgeted R&D expenditures (see below) within science and engineering (S&E) fields. Data obtained is then compiled and published as the NSF annual “Survey of Research and Development Expenditures at Universities and Colleges” (or “Academic R&D Expenditures Survey”). Conducted annually since FY 1972, the survey collects information on R&D expenditures by academic field and by source of funds. Survey results primarily are used to assess trends in R&D expenditures across the fields of science and engineering. Some key data from the most recently completed survey cycle are included at Figures 160.3-1 through 160.3-7. These figures will be updated regularly as current final data from NSF becomes available.

2009 Trend Data\(^1\)

Overall, universities and colleges reported S&E R&D expenditures of $54.9 billion in FY 2008, 5.8% more than in the previous year ($51.4 billion) (see Figure 160.3-1), according to university-reported data collected by the National Science Foundation. When adjusted for inflation, academic R&D rose by 4.2% in FY 2009.

**Federal Funding.** The federal government remains the largest source of academic R&D funding, on average accounting for over 60% of total R&D expenditures since FY 1972 (see Figure 160.3-3). Its share has dropped, however, in recent years, from 64% in FY 2005 to 59% in FY 2009, according to data from NSF. In current dollars, federally funded academic R&D expenditures rose 4.2% in FY 2009 to $32.6 billion. After adjusting for inflation, this represents a 2.6% increase from FY 2008.

**Other Sources of Funding in Fiscal 2009.** R&D funding originating from institutions increased by 7.6% to $11.2 billion (see Figure 160.3-4). R&D expenditures financed by state and local government funding grew 5.7% to $3.6 billion (see Figure 160.3-5). (Institutions report general-purpose funds received from state and local governments as institutional support.) Industry funding continued to rise, growing 11.6% to $3.2 billion (see Figure 160.3-6). Funding from all other sources combined (nonprofit organizations and other nongovernmental entities) increased 9.6% to $4.3 billion (see Figure 160.3-7).

Research Spending and Economic Growth

The conduct of most basic research in the United States occurs at universities, and, according to the National Science Foundation, the federal government funds almost 60% of this research. “This partnership between the federal government and universities helps to form an entrepreneurial ecosystem that benefits the local economy by creating jobs and spurring economic growth,” according to Rep. Carolyn Maloney (D-N.Y.). Her remarks opened a hearing earlier this summer, “Fueling Local Economies: Research, Innovation and Jobs,” held by the congressional Joint Economic Committee, which Maloney co-chairs (see http://jec.senate.gov/public/index.cfm?p=Hearings.)

The hearing came on the heels of a white paper from Maloney’s committee. According to the paper: “The innovations that have improved the country’s productivity and quality of life are ultimately grounded in the results of basic research....Despite its value to society as a whole, basic research is underfunded by private firms precisely because it is performed with no specific commercial applications in mind....The federal government is best positioned to take on the risks of funding basic research projects, which suggests that it may be prudent for the government to increase its expenditures on basic research significantly.” (See “The Pivotal Role of Government Investment in Basic Research” at http://tinyurl. com/2we8dfu.)

The White House also is seeking to demonstrate the connection between research and positive economic outcomes. Earlier this year, its Office of Science and Technology Policy published a request for information seeking ideas for promoting the commercialization of federally funded research. OSTP wanted input from universities and others to identify ways to “increase the economic impact of federal investment in university research and development and the innovations being fostered in federal and private proof of concept centers.”

Agencies Want to Showcase Outcomes

Federal agencies are also hopping on the bandwagon. “A new initiative promises to monitor the impact of federal science investments on employment, knowledge generation, and health outcomes,” according to the agencies spearheading the STAR METRICS project — NIH, NSF, and OSTP. STAR METRICS is an acronym for Science and Technology for America’s Reinvestment: Measuring the Effects of Research on Innovation, Competitiveness and Science.

There are two phases to the program. In Phase I, officials will “develop uniform, auditable and standardized measures of the impact of ARRA and science spending on job creation.” In Phase II, they will develop measurements of the “impact of federal science investment on economic growth (tracing patents, new company startups and other measures), workforce outcomes (through student mobility and employment), scientific knowledge (measured through publications and citations) and, later, social outcomes (such as positive health outcomes measures and green environmental impact factors),” according to the STAR website (http://starmetricscomp.synthosys.com/index.aspx).

Public Sentiment Favorable

Whatever comes of these recent initiatives, the public seems to be supportive of federal research spending. According to the National Science Foundation, in 2008, 84% of Americans expressed support for government funding of basic research. More than one-third of Americans (38%) said in 2008 that the government spends too little on scientific research, while 11% said the government spends too much. The figures are included in the NSF’s Science and Engineering Indicators 2010, which contains a broad spectrum of “quantitative information” on the science and engineering “enterprise” including data on public attitudes (see www.nsf.gov/statistics/seind10/c7/c7h.htm).

(For information on jobs created/retained under the American Recovery and Reinvestment Act, see www.Reporting.gov. For a general discussion of the economic impact of NIH funding on states, see ¶160.7.)
Academic institutions characterized 74.6% of their FY 2009 total R&D expenditures as basic research rather than applied R&D. This proportion has been fairly constant over the last decade.

**Non-S&E R&D Expenditures in Fiscal 2009.** Academic institutions spent a total of $2.4 billion on R&D in non-S&E fields. (Only institutions reporting S&E R&D expenditures are surveyed for non-S&E R&D spending.) The largest amounts reported for individual non-S&E fields were in

- Education: $921 million
- Business and management: $341 million
- Humanities: $253 million
- Other fields: $885 million

**Pass-Through Funds**

R&D funds for joint projects that were passed through primary university recipients to other university subrecipients about doubled from FY 2000 to FY 2008, from $0.7 billion to $1.4 billion in constant 2000 dollars. The current dollar amount ($1.7 billion) represents 3.3% of total academic R&D expenditures in FY 2008. In FY 2008, 90% of these pass-through funds originated from federal sources. Universities receiving pass-through funds from other universities likewise reported a rapid increase in subrecipient R&D expenditures between FY 2000 and FY 2008, with over 90% of the funding originating from federal sources.

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>All Academic R&amp;D Passed Through</th>
<th>Federal Academic R&amp;D Passed Through</th>
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<tr>
<td>2008</td>
<td>$1,387</td>
<td>$1,249</td>
</tr>
<tr>
<td>2007</td>
<td>$1,430</td>
<td>$1,248</td>
</tr>
<tr>
<td>2006</td>
<td>$1,392</td>
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</tr>
<tr>
<td>2000</td>
<td>$699</td>
<td>$626</td>
</tr>
</tbody>
</table>
Note: Unless indicated differently, expenditures included in the following figures refer to S&E R&D activities only. Separately budgeted R&D expenditures include all funds expended for activities that are specifically organized to produce research outcomes. These activities are either commissioned by an agency external to the institution or are separately budgeted by an organizational unit within the institution. Expenditures are funds actually spent by an institution during its fiscal year. Separately budgeted R&D equipment purchased from current funds includes all research equipment purchased under sponsored research project awards.

Figure 160.3-1: Overview of R&D Expenditures By Universities and Colleges, FYs 1953–2009

Figure 160.3-2: R&D Expenditures By Universities and Colleges By Source of Funds, FY 2009


Figure 160.3-3: R&D Expenditures By Universities and Colleges By Source of Funds: Federal Government, FYs 1953–2009

Figure 160.3-4: R&D Expenditures By Universities and Colleges By Source of Funds: Institutional Funds, FYs 1953–2009


Figure 160.3-5: R&D Expenditures By Universities and Colleges By Source of Funds: State and Local Governments, FYs 1953–2009

Figure 160.3-6: R&D Expenditures By Universities and Colleges
By Source of Funds: Industry, FYs 1953–2009


Figure 160.3-7: R&D Expenditures By Universities and Colleges
By Source of Funds: All Other Sources, FYs 1953–2009

Data from the National Science Foundation (NSF) on federal science and engineering (S&E) support to minority-serving institutions, including historically black colleges and universities (HBCUs), high-Hispanic enrollment (HHE) institutions, and tribal colleges show the following:

- Federal academic S&E support to 78 of the 102 HBCUs totaled $406 million in FY 2007, a 8.6% decrease over FY 2006 levels (see Figure 160.4-2). The Department of Health and Human Services contributed over one-third of all federal academic S&E obligations to HBCUs, with the Department of Agriculture funding over one-fourth of the total. R&D (research and development) programs accounted for almost three-fifths (58%) of the HBCU total with other S&E activities totaling over one-fourth.

- In FY 2007, 96 HHE institutions (out of 257) received $594 million in federal academic S&E support. About three-fifths of all federal academic S&E support to these institutions was from HHS, and almost fourth-fifths of the S&E total was for R&D projects (see Figure 160.4-3).

- There were 298 tribal colleges (from a total of 32) that received federal academic S&E obligations for FY 2007 (see Figure 160.4-4). S&E funding levels for tribal colleges decreased by 13.2% in FY 2007, to a $25.0 million. NSF and the USDA combined, funded 64% of the academic S&E total. R&D programs comprised less of the total S&E support of tribal colleges (about one-third) than it did for other types of institutions. More than one-half of all tribal college funding was for other S&E activities, with most funds for “other S&E activities” coming from NSF.


Figure 160.4-1: Federal Academic S&E Obligations, by Agency and Type of Institution: FY 2007

<table>
<thead>
<tr>
<th>Activity</th>
<th>All Federal Obligations</th>
<th>Defense</th>
<th>Energy</th>
<th>HHS</th>
<th>NASA</th>
<th>NSF</th>
<th>USDA</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>All universities and colleges</td>
<td>28,519,932</td>
<td>3,157,565</td>
<td>814,271</td>
<td>17,527,222</td>
<td>552,963</td>
<td>4,209,787</td>
<td>1,252,672</td>
<td>1,005,452</td>
</tr>
<tr>
<td>All HBCUs</td>
<td>406,116</td>
<td>40,608</td>
<td>10,747</td>
<td>150,656</td>
<td>2,975</td>
<td>67,325</td>
<td>113,634</td>
<td>20,171</td>
</tr>
<tr>
<td>All HHEs</td>
<td>593,733</td>
<td>106,653</td>
<td>13,944</td>
<td>342,626</td>
<td>7,792</td>
<td>76,842</td>
<td>29,683</td>
<td>16,193</td>
</tr>
<tr>
<td>All tribal colleges and universities</td>
<td>24,959</td>
<td>2,302</td>
<td>0</td>
<td>4,528</td>
<td>0</td>
<td>10,493</td>
<td>7,285</td>
<td>351</td>
</tr>
</tbody>
</table>

### Figure 160.4-2: Federal Academic S&E Support to the 20 Leading Historically Black Colleges and Universities, Ranked by Total Amount Received, by Agency: FY 2006

(Thousands of dollars)

<table>
<thead>
<tr>
<th>Institution</th>
<th>All obligations</th>
<th>DOD</th>
<th>DOE</th>
<th>HHS</th>
<th>NASA</th>
<th>NSF</th>
<th>USDA</th>
<th>Other agencies*</th>
</tr>
</thead>
<tbody>
<tr>
<td>All HBCUs</td>
<td>444,193</td>
<td>40,069</td>
<td>22,303</td>
<td>148,279</td>
<td>25,820</td>
<td>71,123</td>
<td>117,617</td>
<td>18,982</td>
</tr>
<tr>
<td>Howard U.</td>
<td>34,406</td>
<td>1,748</td>
<td>147</td>
<td>24,170</td>
<td>472</td>
<td>7,138</td>
<td>0</td>
<td>731</td>
</tr>
<tr>
<td>Morehouse School of Medicine</td>
<td>29,884</td>
<td>0</td>
<td>962</td>
<td>28,922</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Meharry Medical C.</td>
<td>27,387</td>
<td>437</td>
<td>0</td>
<td>26,950</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Hampton U.</td>
<td>23,205</td>
<td>1,486</td>
<td>1,070</td>
<td>1,824</td>
<td>12,289</td>
<td>6,106</td>
<td>0</td>
<td>430</td>
</tr>
<tr>
<td>Jackson State U.</td>
<td>20,437</td>
<td>6,629</td>
<td>1,925</td>
<td>5,965</td>
<td>0</td>
<td>4,989</td>
<td>285</td>
<td>644</td>
</tr>
<tr>
<td>Tuskegee U.</td>
<td>18,344</td>
<td>595</td>
<td>199</td>
<td>7,962</td>
<td>204</td>
<td>3,384</td>
<td>6,000</td>
<td>0</td>
</tr>
<tr>
<td>FL A&amp;M U.</td>
<td>18,062</td>
<td>2,636</td>
<td>353</td>
<td>4,226</td>
<td>39</td>
<td>5,695</td>
<td>4,641</td>
<td>472</td>
</tr>
<tr>
<td>NC Agricultural and Technical State U.</td>
<td>17,751</td>
<td>2,378</td>
<td>178</td>
<td>1,492</td>
<td>522</td>
<td>5,029</td>
<td>8,152</td>
<td>0</td>
</tr>
<tr>
<td>AL A&amp;M U.</td>
<td>16,812</td>
<td>4,497</td>
<td>106</td>
<td>130</td>
<td>1,613</td>
<td>283</td>
<td>10,183</td>
<td>0</td>
</tr>
<tr>
<td>TN State U.</td>
<td>13,894</td>
<td>2,135</td>
<td>0</td>
<td>1,957</td>
<td>607</td>
<td>502</td>
<td>8,693</td>
<td>0</td>
</tr>
<tr>
<td>Morgan State U.</td>
<td>13,120</td>
<td>1,774</td>
<td>862</td>
<td>3,829</td>
<td>4,016</td>
<td>1,517</td>
<td>0</td>
<td>1,122</td>
</tr>
<tr>
<td>Prairie View A&amp;M U.</td>
<td>10,611</td>
<td>952</td>
<td>592</td>
<td>133</td>
<td>25</td>
<td>543</td>
<td>8,416</td>
<td>0</td>
</tr>
<tr>
<td>Alcorn State U.</td>
<td>10,122</td>
<td>2,352</td>
<td>0</td>
<td>499</td>
<td>0</td>
<td>528</td>
<td>6,509</td>
<td>234</td>
</tr>
<tr>
<td>Southern U. and A&amp;M C. all campuses</td>
<td>9,390</td>
<td>479</td>
<td>0</td>
<td>831</td>
<td>1,914</td>
<td>1,118</td>
<td>4,424</td>
<td>624</td>
</tr>
<tr>
<td>Clark Atlanta U.</td>
<td>8,770</td>
<td>957</td>
<td>168</td>
<td>3,293</td>
<td>431</td>
<td>3,163</td>
<td>0</td>
<td>758</td>
</tr>
<tr>
<td>SC State U.</td>
<td>8,689</td>
<td>0</td>
<td>1,000</td>
<td>524</td>
<td>252</td>
<td>1,521</td>
<td>4,220</td>
<td>1,172</td>
</tr>
<tr>
<td>Lincoln U. (Jefferson City, MO)</td>
<td>8,422</td>
<td>2,071</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6,351</td>
<td>0</td>
</tr>
<tr>
<td>DE State U.</td>
<td>7,780</td>
<td>1,414</td>
<td>990</td>
<td>356</td>
<td>0</td>
<td>1,295</td>
<td>3,700</td>
<td>25</td>
</tr>
<tr>
<td>KY State U.SC State U.</td>
<td>7,618</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>150</td>
<td>7,468</td>
<td>0</td>
</tr>
<tr>
<td>U. MD Eastern Shore</td>
<td>7,147</td>
<td>301</td>
<td>0</td>
<td>1,273</td>
<td>0</td>
<td>797</td>
<td>4,676</td>
<td>100</td>
</tr>
<tr>
<td>Top 20 institutions</td>
<td>311,901</td>
<td>32,841</td>
<td>8,552</td>
<td>114,336</td>
<td>22,384</td>
<td>43,758</td>
<td>83,718</td>
<td>6,312</td>
</tr>
</tbody>
</table>

* Includes data for the Departments of Commerce, Education, Interior, Labor, and Transportation; Environmental Protection Agency; Office of Justice Programs (part of Department of Justice).

**Figure 160.4-3: Federal Academic S&E Support to the 20 Leading High-Hispanic-Enrollment Institutions, Ranked by Total S&E Obligations, By Agency: FY 2006**

| Institution                                      | All obligations | DOD  | DOE  | ED   | HHS  | NASA | NSF  | USDA | Other agencies
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>All HHE's</td>
<td>603,308</td>
<td>89,934</td>
<td>10,808</td>
<td>13,073</td>
<td>308,650</td>
<td>31,203</td>
<td>101,711</td>
<td>32,842</td>
<td>15,087</td>
</tr>
<tr>
<td>U. NM²</td>
<td>108,714</td>
<td>8,133</td>
<td>4,711</td>
<td>192</td>
<td>71,296</td>
<td>4,037</td>
<td>17,261</td>
<td>1,268</td>
<td>1,816</td>
</tr>
<tr>
<td>NM State U. Main Campus</td>
<td>107,771</td>
<td>53,275</td>
<td>1,317</td>
<td>200</td>
<td>10,529</td>
<td>19,789</td>
<td>11,222</td>
<td>10,502</td>
<td>937</td>
</tr>
<tr>
<td>U. TX Health Science Ctr. San Antonio</td>
<td>89,493</td>
<td>3,859</td>
<td>0</td>
<td>1,255</td>
<td>84,122</td>
<td>0</td>
<td>257</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>FL International U.</td>
<td>33,303</td>
<td>5,167</td>
<td>841</td>
<td>244</td>
<td>15,791</td>
<td>25</td>
<td>9,153</td>
<td>100</td>
<td>1,982</td>
</tr>
<tr>
<td>U. PR Medical Sciences Campus</td>
<td>32,758</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>32,636</td>
<td>0</td>
<td>122</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>U. TX San Antonio</td>
<td>25,177</td>
<td>6,642</td>
<td>0</td>
<td>429</td>
<td>13,368</td>
<td>58</td>
<td>1,992</td>
<td>704</td>
<td>1,984</td>
</tr>
<tr>
<td>U. PR Rio Piedras Campus</td>
<td>23,353</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>12,709</td>
<td>1,015</td>
<td>9,629</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>U. PR Mayaguez Campus</td>
<td>22,309</td>
<td>2,733</td>
<td>204</td>
<td>0</td>
<td>870</td>
<td>352</td>
<td>4,773</td>
<td>13,024</td>
<td>353</td>
</tr>
<tr>
<td>U. TX El Paso</td>
<td>21,587</td>
<td>1,350</td>
<td>46</td>
<td>1,151</td>
<td>9,085</td>
<td>5</td>
<td>9,552</td>
<td>0</td>
<td>400</td>
</tr>
<tr>
<td>CA State U. Los Angeles</td>
<td>15,256</td>
<td>241</td>
<td>0</td>
<td>0</td>
<td>8,296</td>
<td>1,581</td>
<td>4,904</td>
<td>234</td>
<td>0</td>
</tr>
<tr>
<td>CUNY The City C.</td>
<td>12,218</td>
<td>0</td>
<td>334</td>
<td>0</td>
<td>119</td>
<td>1,169</td>
<td>9,655</td>
<td>20</td>
<td>921</td>
</tr>
<tr>
<td>CUNY New York City C. of Technology</td>
<td>11,514</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10,226</td>
<td>0</td>
<td>1,288</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Universidad Central del Caribe</td>
<td>6,896</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6,896</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CA State U. Northridge</td>
<td>6,020</td>
<td>337</td>
<td>53</td>
<td>0</td>
<td>3,356</td>
<td>0</td>
<td>2,274</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>CA State U. Fullerton</td>
<td>5,395</td>
<td>0</td>
<td>57</td>
<td>0</td>
<td>1,606</td>
<td>37</td>
<td>1,263</td>
<td>32</td>
<td>2,400</td>
</tr>
<tr>
<td>U. TX-Pan American</td>
<td>5,185</td>
<td>2,145</td>
<td>0</td>
<td>305</td>
<td>862</td>
<td>0</td>
<td>1,177</td>
<td>600</td>
<td>96</td>
</tr>
<tr>
<td>CA State Polytechnic U. Pomona</td>
<td>5,132</td>
<td>120</td>
<td>0</td>
<td>892</td>
<td>1,789</td>
<td>7</td>
<td>2,260</td>
<td>0</td>
<td>64</td>
</tr>
<tr>
<td>U. TX Brownsville</td>
<td>4,898</td>
<td>157</td>
<td>0</td>
<td>223</td>
<td>2,230</td>
<td>1,409</td>
<td>875</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>CUNY Herbert H. Lehman C.</td>
<td>3,913</td>
<td>0</td>
<td>50</td>
<td>0</td>
<td>3,042</td>
<td>0</td>
<td>626</td>
<td>195</td>
<td>0</td>
</tr>
<tr>
<td>CA State U. Dominguez Hills</td>
<td>3,833</td>
<td>559</td>
<td>0</td>
<td>2,095</td>
<td>890</td>
<td>0</td>
<td>289</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Top 20 institutions</td>
<td>544,725</td>
<td>84,718</td>
<td>7,613</td>
<td>6,986</td>
<td>289,718</td>
<td>29,482</td>
<td>88,572</td>
<td>26,679</td>
<td>10,957</td>
</tr>
</tbody>
</table>

¹ Includes data for the Departments of Commerce, Homeland Security, Interior, Labor, and Transportation; Agency for International Development; Environmental Protection Agency; Office of Justice Programs (part of Department of Justice); and Social Security Administration.

² University of New Mexico’s Gallup campus is not a high-Hispanic-enrollment institution; data for the Gallup campus are therefore excluded from the total.

NOTE: High-Hispanic-enrollment institutions are defined as having at least 25% Hispanic full-time equivalent undergraduate enrollment in fall 2005.

### Figure 160.4-4: Federal Academic S&E Support to the 20 Top-Ranked Tribal Colleges, Ranked by Total S&E Obligations, by Agency: FY 2006

<table>
<thead>
<tr>
<th>Institution</th>
<th>All obligations</th>
<th>DOC</th>
<th>DOD</th>
<th>DOI</th>
<th>ED</th>
<th>HHS</th>
<th>NASA</th>
<th>NSF</th>
<th>USDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>All tribal colleges</td>
<td>28,744</td>
<td>150</td>
<td>7</td>
<td>50</td>
<td>7,127</td>
<td>2,628</td>
<td>265</td>
<td>10,248</td>
<td>8,269</td>
</tr>
<tr>
<td>Salish Kootenai C.</td>
<td>4,610</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>720</td>
<td>765</td>
<td>265</td>
<td>2,259</td>
<td>601</td>
</tr>
<tr>
<td>Oglala Lakota C.</td>
<td>3,620</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>646</td>
<td>302</td>
<td>0</td>
<td>2,371</td>
<td>301</td>
</tr>
<tr>
<td>Ft. Berthold Community C.</td>
<td>2,313</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1,964</td>
<td>349</td>
</tr>
<tr>
<td>Sisseton-Wahpeton Community C.</td>
<td>2,186</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>449</td>
<td>249</td>
<td>0</td>
<td>1,350</td>
<td>138</td>
</tr>
<tr>
<td>United Tribes Technical C.</td>
<td>1,573</td>
<td>150</td>
<td>0</td>
<td>0</td>
<td>1,000</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>423</td>
</tr>
<tr>
<td>C. of Menominee Nation</td>
<td>1,472</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>462</td>
<td>0</td>
<td>0</td>
<td>645</td>
<td>365</td>
</tr>
<tr>
<td>Ft. Peck Community C.</td>
<td>1,466</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>613</td>
<td>109</td>
<td>0</td>
<td>414</td>
<td>330</td>
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<tr>
<td>Blackfeet Community C.</td>
<td>1,306</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>568</td>
<td>0</td>
<td>0</td>
<td>481</td>
<td>257</td>
</tr>
<tr>
<td>Sitting Bull C.</td>
<td>1,278</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>465</td>
<td>0</td>
<td>0</td>
<td>586</td>
<td>227</td>
</tr>
<tr>
<td>Dine C.</td>
<td>1,087</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>559</td>
<td>0</td>
<td>0</td>
<td>528</td>
</tr>
<tr>
<td>Stone Child C.</td>
<td>964</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>490</td>
<td>97</td>
<td>0</td>
<td>0</td>
<td>377</td>
</tr>
<tr>
<td>Turtle Mountain Community C.</td>
<td>943</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>520</td>
<td>50</td>
<td>0</td>
<td>0</td>
<td>373</td>
</tr>
<tr>
<td>Sinte Gleska U.</td>
<td>837</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>592</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>195</td>
</tr>
<tr>
<td>Ft. Belknap C.</td>
<td>814</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>602</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Haskell Indian Nations U.</td>
<td>482</td>
<td>0</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>109</td>
<td>0</td>
<td>0</td>
<td>366</td>
</tr>
<tr>
<td>Lac Courte Oreilles Ojibwa Community C.</td>
<td>450</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>450</td>
</tr>
<tr>
<td>Northwest Indian C.</td>
<td>446</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>116</td>
<td>0</td>
<td>78</td>
<td>252</td>
</tr>
<tr>
<td>Cankdeska Cikana Community C.</td>
<td>402</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>109</td>
<td>0</td>
<td>50</td>
<td>243</td>
</tr>
<tr>
<td>Southwestern Indian Polytechnic Institute</td>
<td>366</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>108</td>
<td>0</td>
<td>0</td>
<td>258</td>
</tr>
<tr>
<td>Little Priest Tribal C.</td>
<td>339</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>339</td>
</tr>
<tr>
<td>Top 20 institutions</td>
<td>26,954</td>
<td>150</td>
<td>7</td>
<td>50</td>
<td>7,127</td>
<td>2,573</td>
<td>265</td>
<td>10,198</td>
<td>6,584</td>
</tr>
</tbody>
</table>

Profile of a Research Administrator*
Thomas J. Roberts, Florida Gulf Coast University
Jess House, University of Central Florida

Abstract
The purpose of this research was to determine the demographic characteristics of research administration professionals. This is the first time that empirical research characterizing the demographic profile of research administration professionals has been conducted. The population of respondents for the study included 277 research administrators based in the southeastern region of NCURA. Data were collected utilizing an Internet-based electronic survey instrument. A total of 230 usable surveys were collected (83% rate of return). The general profile of a research administrator is: female; 40–49 years of age; bachelor’s degree; 6–10 years in the profession; earning between $40–50,000 annually; and came to the field by working at a university and transferring to a predominantly research administration position.

Delimitations and Limitations
The research was delimited to research administrators based in the southeastern region of the United States as defined by the National Council of University Research Administrators (NCURA) (Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, and Virginia). The sample population was selected because the southeastern region is the home region of Thomas J. Roberts, and is one of the largest NCURA regions (NCURA membership = 22%). It was anticipated that the response rate to the administered survey would likely yield the best results if the aforementioned population was utilized.

This study was limited due by the assumption that respondents would answer the survey questions honestly. Furthermore, the accuracy and currency of the records obtained from NCURA could not be verified and therefore could not be controlled.

Introduction
The university research mission has never been more important, yet little is known about a key figure in carrying out this mission: the research administrator. These administrators were not directly responsible for the advances in medicine, science, technology, and the social sciences that have resulted from university research, but they provided and managed the supportive conditions and organizational structures that were necessary for the research. A thorough search of the literature failed to reveal any research on the characteristics of university research administrators, including educational background, age, gender, and salary level. This lack of basic knowledge presents an obstacle to capacity-building and professional development efforts, including

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certification programs and other efforts to further professionalize the role. Yet, the quality of future university research is intertwined with the effectiveness of the research administrators.

The purpose of this research was to determine the demographic characteristics of research administration professionals. No previous empirical research has characterized the demographic profile of research administration professionals.

Formalization of the professional field of research administration was concurrent with the establishment of the National Council of University Research Administrators (NCURA) in 1959. Since this beginning, the number of research administrators has kept pace with the dramatic rise in external funding awarded to colleges and universities for research, the scale of research management on campuses, and the complicated legal and regulatory requirements associated with receiving external funding (Hansen & Moreland, 2004). Several educational certificate programs for research administrators have emerged over the past decade, beginning with the establishment of the Research Administrators Certification Council (RACC) in 1993 (Research Administration Certification Council, 2005), various internal educational programs on campuses throughout the country, and the first graduate certificate program in research administration management at Cleveland State University in 2005. However, no formal degree program in research administration or management has yet been offered, although interest in such a degree is evident from discussions held in various committee meetings and at national and regional conferences of research administration professionals. Universities that would otherwise consider offering a degree in research administration might well hesitate in the absence of basic information on the role. This article contributes a demographic profile of research administrators based on recently conducted survey research.

**Statement of the Problem**

No empirical research has characterized the demographic profile of research administration professionals. Despite increases in external support provided to colleges and universities for research, and associated increases in the number of people employed in the field, the profession lacks basic demographic profile information. It was not known how individuals initially became involved in the field of research administration. The purpose of this research was to begin to collect this data.

**Methodology, Population, and Sample**

The population of respondents for this study included research administrators based in the southeastern region of NCURA. According to NCURA figures for 2005, 1,101 members were based in the southeastern region. Of these potential respondents, 134 were purposely selected because they had achieved certification through the Research Administrators Certification Council (RACC). Another 143 potential respondents were added to the sample by random selection from the NCURA database. The demographic data collected were from the study entitled, *Perceptions of Research Administrators on the Value of Certification* (Roberts, 2005). A more detailed description of the population and sample may be found in this study.
An Internet-based survey instrument, Research Administrator Survey (RAS), was developed to collect demographic data from research administrators. Following a satisfactory pilot study, the survey instrument was distributed to 277 potential respondents via an electronic mail notification. It included a link to an Internet site where the survey could be completed online. Each potential respondent was contacted by telephone or e-mail and notified that the study was in progress. Confirmation of contact information for all potential respondents was checked for accuracy and edited as necessary. Three electronic mail requests were followed by personal telephone calls to those who did not respond to the electronic mail requests.

**Results**

A total of 230 usable surveys were returned, for a return rate of 83%. Analysis of the survey data revealed demographic information on research administrators in terms of gender, age, academic qualifications, experience in research administration, salary, and mode of entry into research administration. These characteristics are described in detail below.

**Gender and Age.** The professional field of research administration is dominated by women. The NCURA member database was accessed on February 9, 2005 and revealed that the Southeast Region had 1,101 members — 79% women and 21% men (NCURA, 2005). In addition, the NCURA member profile database was accessed on February 10, 2006 and revealed that 183 members within the Southeast Region had completed member profiles (NCURA, 2006). According to the member profile, of those based in the Southeast Region of NCURA, 74% are female and 26% are male. The Society of Research Administrators International (2004) database was accessed on September 24, 2004 and revealed total membership of 3,619 people — 73% women and 27% men.

A total of 76% of the respondents to the RAS were female and 24% were male. Respondents ranged in age from 20 to over 70. The majority of the respondents (91%) were between the ages of 30–59. Table 1 presents the demographic data pertaining to age and gender of respondents.

<table>
<thead>
<tr>
<th>Table 1. Age of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response</strong></td>
</tr>
<tr>
<td>20-29</td>
</tr>
<tr>
<td>30-39</td>
</tr>
<tr>
<td>40-49</td>
</tr>
<tr>
<td>50-59</td>
</tr>
<tr>
<td>60-69</td>
</tr>
<tr>
<td>70 and above</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

**Educational Level of Respondents.** The educational level of respondents ranged from high school diploma or GED equivalent to doctorate. Over 70% of the respondents held a bachelor’s or master’s degree. Table 2 shows the educational level of respondents.
Classification of Position. Respondents were asked to identify the classification of their current position. The majority of respondents were either coordinators or directors. Table 3 illustrates the position classification of the respondents.

<table>
<thead>
<tr>
<th>Table 3. Classification of Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
</tr>
<tr>
<td>Coordinator or Professional Staff</td>
</tr>
<tr>
<td>Director</td>
</tr>
<tr>
<td>Associate or Assistant</td>
</tr>
<tr>
<td>General</td>
</tr>
<tr>
<td>Vice President (Full,</td>
</tr>
<tr>
<td>Associate, Assistant)</td>
</tr>
<tr>
<td>Dean</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Salary Ranges of Respondents. Salary ranges of respondents ranged from less than $30,000 annually to above $80,000 annually. Seventy-five percent (75%) of the respondents reported salaries between $30,000 and $70,000 annually. Table 4 provides details about the salary ranges of the respondents.

<table>
<thead>
<tr>
<th>Table 4. Salary Ranges of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
</tr>
<tr>
<td>Less than $30,000 annually</td>
</tr>
<tr>
<td>$30,000 to $40,000 annually</td>
</tr>
<tr>
<td>$40,001 to $50,000 annually</td>
</tr>
<tr>
<td>$50,001 to $60,000 annually</td>
</tr>
<tr>
<td>$60,001 to $70,000 annually</td>
</tr>
<tr>
<td>$70,001 to $80,000 annually</td>
</tr>
<tr>
<td>Above $80,000 annually</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

How Respondents Became Involved in Field of Research Administration. Respondents were asked how they initially became involved in the field of research administration. Table 5 provides a summary of their responses.
The summary findings and discussion of the data collected pertaining to demographic profile information of research administrators are presented below.

The modal demographic profile of research administrators is as follows:

- female,
- bachelor’s degree,
- 40–49 years of age,
- 6–10 years experience as research administrator, and
- $40–50,000 salary.

It is apparent that research administration is a field dominated by females. This is evidenced by the gender make-up of both NCURA and SRA databases. Between September 2004 and February 2006, three random inquiries were made of NCURA and SRA databases. Female membership ranged between 73%–79% and male membership ranged from 21%–27%. This was consistent with the respondents to the Research Administrator Survey as 76% were female and 24% male. Eight-nine percent (89%) of respondents to the Research Administrator Survey ranged in age from 30 to 59, and gender was consistent with the random NCURA and SRA database membership inquiries.

The role of research administrator is clearly dominated by women. As can be seen in the tables in this report, women outnumber men in every meaningful category of response. For example, there are at least twice as many women as men in each of the position classifications, with one exception. The exception is in the vice presidency, where women still dominate, but by a lesser ratio of 3:2. More men than women can only be found in one category of the educational level of respondents. Men have a slight edge over women at the doctoral degree level (52–48%).

| Table 5. How Respondents Initially Became Involved in Field of Research Administration |
|---------------------------------|-----|-----|
| Response                        | N*  | (%)*|
| Worked in another area of the same organization and transferred to a predominantly research administration position | 81  | (36) |
| Worked for a government organization involved in grant related activity, but not specifically research administration | 34  | (15) |
| Worked for a not-for-profit organization involved in grant related activity, but not specifically research administration | 23  | (10) |
| Worked in the private sector involved in grant related activity, but not specifically research administration | 14  | (6)  |
| Was a faculty member/professor and transferred to a predominantly research administration position | 13  | (6)  |
| Was a student worker and offered a position after graduating | 3   | (1)  |
| Worked at another university, but not directly in research administration | 3   | (1)  |
| Grew up wanting to be a research administrator | 1   | (1)  |

*N and (%) exceed because respondents were permitted to check more than one answer.
Recommendations for Future Research

Further research is suggested in the following areas:

1. It is recommended that a replication of the demographic section of the Research Administrator Survey be done in another region of the United States to further validate the results.

2. It is recommended that research be conducted to determine if curricula should be developed at the university level in research administration management.

3. It is recommended that the primary professional organizations in support of research administration engage in research to determine the number of people involved in the profession of research administration in order to provide an impetus for curriculum development and continuing adult education.

References


Results from the 2007 Research Administrator Stress Perception Survey (RASPerS)¹, ²
Jennifer Shambrook, M.H.A., Ph.D. Candidate, Medical University of South Carolina and Olga Brawman-Mintzer, M.D., Medical University of South Carolina

Authors’ note: This work is dedicated to our research administration colleague, Debra Ann Grandberry, M.A. (1964-2007).

Abstract
Research administrators’ work combines considerable intellectual demands with strict timelines — both potential contributors to job strain. We examined levels of perceived stress, health effects, and coping mechanisms in a sample of research administrators. The Research Administrator Stress Perception Survey (RASPerS) was administered anonymously to over 600 people in the field. We found that the greatest number of respondents perceived their levels of work-related stress as high (41.3%); work-related home stress as moderate (42.5%); and stress from competing demands of work and home as moderate (35.4%) or high (35.1%). Research administrators endorse working in a high-stress environment, often feel under-appreciated for their contributions, fail to maintain a healthy lifestyle, and often feel they have neglected other important aspects of their lives in deference to the demands of work. Sixty-six percent reported having inadequate resources to complete their job in a forty-hour work-week. When asked why they continue to work in research administration, the prevalent responses were the challenge, variety of tasks, working with intelligent colleagues, job security, and feeling a sense of purpose.

Introduction
Roberts and House (2006) described the profile of a typical research administrator as a female in her 40s, with an income between $40–50,000 per year, holding a bachelor’s degree in another field, with six to ten years of experience. Research administrators have to navigate changing and increasing regulations, new methods of grant submission, more frequent deadlines due to new policies at government agencies, more applications to obtain funding due to funding agency cutbacks and rising prices, and budget cuts that eliminate jobs and often create situations in which fewer people are managing an increased work-load. Available data indicate that job strain significantly affects research administrators’ health and quality of life. It is interesting to note that according to qualitative data from this study, participants reported that improving the health and quality of life of others is the primary motivator for staying in this field.

High levels of stress have been shown to be associated with cardiovascular disease, hypertension, depression, digestive disorders, weight gain, insomnia, unhealthy

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²This survey was updated in 2011, see ¶160.9.
behaviors, and a host of other maladies due to stress-related weakened immune system (DHHS, 2004; Mayo Clinic, 2006; WebMD, 2005). Smith et al. (2000) reported that professional and support management careers are among the highest stress-producing professions. Jobs were considered to be high stress if 19% or more of the sample from that job class reported feeling high or extremely high stress. In their sample of 17,000 workers, about 20% reported having high or extremely high levels of stress.

The purpose of this study was to look at a previously unstudied subset of professional and support management personnel working in the field of research administration. The Research Administration Stress Perception Survey (RASPerS) was designed with a two-fold purpose: to ask questions and to provoke self-examination as a health promotion tool for this population. If the survey was distilled to one over-arching query, it would be to determine if research administrators are benefiting from the findings of public health research in preventive medicine as it relates to very basic stress management. Additionally, it is hoped that by merely answering the questions, research administrators are increasing their awareness of their health-related lifestyle and moving along the stages of change toward adopting best practices for good health (Prochaska & DiClemente, 1983).

**Methodology**

The RASPerS instrument was developed specifically for the target population. The target population consisted of self-identified research administrators (RAs). The survey instrument was submitted to the Internal Review Board for Human Use in Research (IRB) at the Medical University of South Carolina. As it was being administered anonymously and the only identifiers were gender and years in service, it was categorized as being exempt from review of the full committee. It was approved by a subcommittee of the IRB and assigned protocol number HR 17440.

The RASPerS was administered online through SurveyMonkey® with an original small pilot group of 32 RAs. The original survey used in the pilot was modified in two respects. In one field of the original survey, those who were interested in receiving the survey results could enter their email address. This was eliminated in order to protect the anonymity of the participants. The second modification was to indicate that the last question, which required an essay-type qualitative response, was an optional question. This was done because only about half of the original 32 replied to that question. The authors felt that by labeling this question as optional, the participants would have a greater feeling of satisfaction with their survey experience.

The authors expected fewer than 100 responses and had registered for that level with SurveyMonkey®. Email addresses of RAs that had been copied on email to the first author had been collected and collated into a direct contact list of approximately 40 RAs. A solicitation was sent to the RESADM-L list serve requesting that list serve members participate in the survey. A duplicate email was sent to the direct contact list. In less than five minutes, over 100 responses had been collected and additional participants were being rejected. It was necessary to upgrade the Survey Monkey® account to accommodate 1,000 responses. Another email was sent to the RESADM-L list serve to
notify potential participants who had been unable to complete the survey after the first five minutes because it had reached maximum capacity without upgrade.

Within two hours, over 300 participants had completed the survey. Within three days, over 500 RAs had participated. After two weeks, when the survey was closed by the authors in order to begin writing the report of the results, 624 RAs had completed the survey. This high level of response could be taken as an indicator of the level of interest in the topic of profession-related stress by this population.

The 2007 RASPerS consisted of nine sections:
1. Perceived levels of stress due to:
   a. Work
   b. Home due to work
   c. Competing demands of work and home
2. Priorities and appreciation
   a. Self-efficacy in synchronization of time and priorities
   b. Feelings of appreciation by non-administrative colleagues
3. Healthy lifestyle
   a. Sleep
   b. Exercise
   c. Nutrition
   d. Hydration
   e. Break for lunch
4. Healthy weight
5. Likely response to a scenario of dealing with potentially life-threatening illness during a deadline
6. Perceptions of negligence due to work of:
   a. Physical health
   b. Spiritual and/or mental health
   c. Family or social relationships
7. Adequate resources available to accomplish job in 40-hour work-week
8. Demographics
   a. Number of years in RA
   b. Gender
9. Optional qualitative response to explain why they continue to work in RA
Data were analyzed using data analysis tools included in the upgraded version of SurveyMonkey®. Composite data are shown in the results section, giving absolute numbers and/or percentages and graphical representations. Graphical representations of data shown in all figures in the Results section were prepared using Microsoft Excel.

**Results**

**Demographic Information**

Demographic questions were limited in order to keep the survey as brief as possible and to limit the personal information that might compromise anonymity. RASPerS participants were only asked to indicate their number of years in research administration and their gender. More than ten years of experience was the prevalent answer. Figure 1 shows the breakdown of years of service.

![Figure 1. Years of Research Administration Service by RASPerS Participants](image)

Gender distribution closely replicates the Roberts and House (2006) study, which showed that over 80% of the employees in this profession were females. Figure 2 shows the gender distribution as indicated in the RASPerS data.
Perceptions of Stress

Question 1 was designed to rate levels of stress at work, home due to work, and feelings of anxiety due to competing demands of home and work. As shown in both Table 1 and Figure 3, the prevailing answers were high work-related stress and moderate home stress due to work. For feelings of anxiety from competing demands of home and work, there was no significant difference between moderate (35.4%) and high (35.1%). Figure 4 combines the responses of minimal with moderate and high with extremely high.

Table 1. Perceived Level of Stress as Shown by Percentage and Number of Responses

<table>
<thead>
<tr>
<th>Q1. Please rate your perceived levels of stress in the following areas</th>
<th>Minimal</th>
<th>Moderate</th>
<th>High</th>
<th>Extremely High</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your perceived level of work-related stress</td>
<td>6.1%</td>
<td>36.4%</td>
<td>41.3%</td>
<td>16.2%</td>
<td>624</td>
</tr>
<tr>
<td>(38)</td>
<td>(227)</td>
<td>(258)</td>
<td>(101)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amount of stress at home due to demands of work</td>
<td>30.3%</td>
<td>42.5%</td>
<td>23.0%</td>
<td>4.2%</td>
<td>623</td>
</tr>
<tr>
<td>(189)</td>
<td>(265)</td>
<td>(143)</td>
<td>(26)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feelings of anxiety due to competing demands of work and home</td>
<td>17.2%</td>
<td>35.4%</td>
<td>35.1%</td>
<td>12.2%</td>
<td>621</td>
</tr>
<tr>
<td>(107)</td>
<td>(220)</td>
<td>(218)</td>
<td>(76)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Feelings of Control and Appreciation

Participants were asked in RASPerS Question 2 to choose responses from a standard Likert scale of Always, Often, Sometimes, Seldom and Never. The questions were worded as follows:

a. Think of your top priorities and goals in life. Do you feel your priorities and the way you spend your time are well aligned with one another?

b. Do you feel your non-administrative research colleagues appreciate your contributions to the research mission of your organization?

As is shown in Figure 4, there was a huge prevalence for the middle answer, “sometimes,” for both questions. However, the most significant information concerning differences can be seen by comparing the information that is on either side of the middle, or more neutral, selection (Albaum, 1997). For Question 2a, concerning synchronization of time and priorities, there is a similar distribution among RASPerS participants when comparing the Always/Often responses (160, 25.8%) to the Seldom/Never responses (149, 24.0%). The 50.2% in the Sometimes area felt that they were able to align time and priorities at least some of the time. Conversely, those same participants reported that at least some of the time, they were not able to align their time commitments with their priorities. All in all, this is fairly evenly distributed.
Figure 4 also depicts the responses to Question 2b, which concerns feelings of appreciation from non-administrative colleagues for contributions to the research mission. Again, a majority were in the “sometimes” category at 40.7%. Unlike the previous question, however, there was a notable difference in percentage between those who felt they were appreciated either always or often (23.5%) and those who felt they were appreciated either seldom or never (33.6%).

Healthy Lifestyle

Question 3 addressed healthy lifestyle practices and Question 4 addressed one aspect of healthy lifestyle results. These practices were selected as identified as practices that can contribute to stress management (DHHS, 2004; Medline Plus, 2005; NIOSH, 1998). Question 3 asked participants to indicate the number of days per week they practiced the following healthy lifestyle behaviors:

- How many nights per week do you have 7 or more hours of uninterrupted sleep?
- How many days per week do you engage in leisure time physical activity for 20 minutes or more?
- How many days per week do you eat five or more ½ cup servings of fruits and vegetables?
◆ How many days per week do you consume at least eight 8-ounce glasses of water?
◆ How many days per week do you leave your desk and take a break from work during lunch?

The prevalent answers for practicing each of the five health promotion behaviors were between zero and two days per week. For sleep and hydration, the prevalent answer was zero. For leisure time physical exercise, nutrition, and taking a break at lunchtime, the prevalent response was two days per week. Thus, as a group, RAs were not actively practicing these basic health promotion behaviors. Table 2 shows the responses for each category by day.

<table>
<thead>
<tr>
<th>Days per Week</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>7 hours sleep</td>
<td>121</td>
<td>75</td>
<td>107</td>
<td>84</td>
<td>83</td>
<td>66</td>
<td>47</td>
<td>32</td>
<td>615</td>
</tr>
<tr>
<td>20 min. or more exercise</td>
<td>72</td>
<td>80</td>
<td>141</td>
<td>102</td>
<td>78</td>
<td>64</td>
<td>29</td>
<td>48</td>
<td>614</td>
</tr>
<tr>
<td>5 or more fruits or veggies</td>
<td>95</td>
<td>55</td>
<td>105</td>
<td>100</td>
<td>77</td>
<td>71</td>
<td>44</td>
<td>66</td>
<td>613</td>
</tr>
<tr>
<td>8 8-oz. glasses water</td>
<td>152</td>
<td>48</td>
<td>69</td>
<td>57</td>
<td>56</td>
<td>72</td>
<td>45</td>
<td>115</td>
<td>614</td>
</tr>
<tr>
<td>Break for lunch</td>
<td>119</td>
<td>119</td>
<td>122</td>
<td>79</td>
<td>51</td>
<td>109</td>
<td>10</td>
<td>3</td>
<td>612</td>
</tr>
</tbody>
</table>

In Figure 5, a stacked area chart is used to depict the frequency of engaging in the healthy behaviors measured more often than not (four or more days per week). The stacked area chart represents 100% of the respondents for each item and corrects for the difference in the number of respondents in the separate items. The total group of participants was divided to show the percentage who participated in each healthy behavior zero to three days per week; those are compared to those who practiced the healthy behaviors four to seven days per week. As shown in Figure 5, more often than not (4–7 days per week) scored lower in every category as follows: 28%, taking a break at lunch; 36%, exercise; 37%, sleep; 42%, nutrition; and 47%, hydration.

As a measure of the healthy lifestyle outcomes, perceived body mass index (BMI) was measured. The Body Mass Index Scale is a tool used by the National Heart Lung and Blood Institute as an indicator of healthy body weight (NHLBI). Respondents were given the web address of the BMI scale, or were allowed to just give their estimate of whether their BMI was in the healthy range. The question asked was: Are you at a healthy weight according to recommended standards of the Body Mass Index? Their answer choices were: yes, probably, don’t know, probably not, and definitely not. The most prevalent answer was probably not (34.4%). Among respondents, 57% indicated that they either were not or probably were not within the recommended BMI range,
Figure 5. Comparison of Low Frequency or High Frequency of Engaging in Healthy Behaviors. Stacked Area Chart Depicts 100% of Responses for Each Category and Compares 0–3 Days per Week (Less Frequency) to 4–7 Days per Week (High Frequency)

Days per Week Engaging in Healthy Behaviors

<table>
<thead>
<tr>
<th>Break for lunch</th>
<th>Exercise</th>
<th>Sleep</th>
<th>Nutrition</th>
<th>Hydration</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 3</td>
<td>72%</td>
<td>64%</td>
<td>63%</td>
<td>58%</td>
</tr>
<tr>
<td>4 to 7</td>
<td>28%</td>
<td>36%</td>
<td>37%</td>
<td>42%</td>
</tr>
</tbody>
</table>

while 3.9% indicated that they did not know if they were or were not within the recommended BMI range. A total of 39.5% indicated that they either were or probably were within the recommended BMI range.
**Work-Related Health Promotion Scenario**

Participants were asked to select the best answer for their possible response to the following situation: “If you had pneumonia during a major deadline, what would you most likely do?” Possible choices are shown below:

1. Work through the deadline and rest afterward.
2. Work at home during the day and possibly come in at night.
3. Work at home.
4. Make arrangements for someone else to manage my desk, call me if needed, and stay home in bed.
5. Expect my colleagues to manage without me while I recover.

The prevalent answer was choice 1, work through the deadline and rest afterward, at 34.4%. Among other participants, 5.0% said they would work at home and come in at night; and 20.5% said they would work at home. The second most popular answer was to have someone else cover their desk and call if needed, at 32.7%, while 7.4% said they would expect their colleagues to manage without them while they recover. Taken together, 59.9% said they would work through pneumonia and 41.1% said they would go to bed.

**Perceived Feelings of Negligence**

Participants were asked if they felt they had frequently neglected their physical health, mental or spiritual health, and/or family or social relationships in order to meet the demands of their job. The response was overwhelmingly “yes” in each of the three areas. Table 3 shows percentages and number of respondents for each of the possible choices of “yes,” “no,” or “maybe, I’m not sure.”

<table>
<thead>
<tr>
<th>In order to meet the demands of your job, do you feel you have:</th>
<th>Yes</th>
<th>Maybe, I’m not sure</th>
<th>No</th>
<th>Response Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequently neglected your physical health?</td>
<td>51.6% (308)</td>
<td>19.4% (116)</td>
<td>29.0% (173)</td>
<td>597</td>
</tr>
<tr>
<td>Frequently neglected your mental or spiritual health?</td>
<td>56.4% (336)</td>
<td>19.0% (113)</td>
<td>24.7% (147)</td>
<td>596</td>
</tr>
<tr>
<td>Frequently neglected your family or social relationships?</td>
<td>45.0% (268)</td>
<td>21.0% (125)</td>
<td>33.9% (202)</td>
<td>595</td>
</tr>
</tbody>
</table>
Adequacy of Resources

When asked if they felt they currently had adequate support and resources to accomplish their job in a satisfactory manner in a 40-hour work-week, RASPerS participants were allowed to select “yes,” “no,” or “other.” The “other” category had a comment box in which they could respond in more detail if needed. Among participants, 29.6% (177) selected “yes,” indicating that they had sufficient resources to complete their job satisfactorily in a 40-hour work-week. Another 65.6% (393) selected “no,” indicating they did not have sufficient resources to complete their job in a 40-hour work-week. Finally, 4.8% (29) selected “other.” Of these, two wrote yes with comment, and seven wrote no, with comment. Twenty essentially said they did not have 40-hour work-weeks now, but plans were in place for that to be alleviated through new hires or redistribution of duties, or that there were wide fluctuations in their schedules depending on the time of year. So, after adjustment for comment responses, 179 (29.8%) indicated that they had adequate resources for a 40-hour work-week, while 400 (66.8%) indicated they did not have adequate resources to successfully complete their work in a 40-hour week.

Discussion

To our knowledge, this is the first survey presenting a detailed profile of a research administrator’s stress perception and health behavior profile. We observed that the majority of survey participants endorsed the following characteristics:

◆ Work-related stress: high
◆ Work-related home stress: moderate
◆ Stress due to competing demands of home and work: moderate/high
◆ Sometimes able to align personal goals with time commitments
◆ Sometimes, but usually not, feels appreciated by non-administrative colleagues
◆ Never gets 7 hours of sleep or drinks enough water
◆ Exercises, eats right, and takes a lunch break 2 days a week
◆ Unhealthy weight status
◆ Would work during a deadline, even if they are very sick
◆ Feels they have neglected physical health, mental or spiritual health, and friends or family in deference to work
◆ Works in an environment where there are not adequate resources to accomplish the job adequately in a 40-hour work-week
◆ Served the profession for more than five years
◆ Female
Recommendations

In looking at the prevalent description above, this does not epitomize best practices from what has been learned and published in biomedical research over the ten-plus years that most of these dedicated people have been serving the research community. Hansen and Moreland (2004) described the need for the research administrator to be Janus-faced, looking both forward and backward, to perform due diligence while embracing the principles and values of research administration. Research administrators must also be encouraged to look in the mirror and consider their lives holistically in the present. Are we practicing the sermons we are enabling the researchers to preach through their research? If not, what can be done to change our behaviors or occupational environments to facilitate the adoption of healthier behaviors and ultimate likely health outcomes?

Limitations of the Study

This survey did not collect extensive demographic data that may have some association with stress. As described above, this was done in the interest of keeping the time commitment of the participants at a minimum and reducing personal identification information as much as possible in order to maintain anonymity. Future studies, however, may collect age and marital status, as other studies have shown an association between professional stress and these demographic factors (Smith et al., 2000).

Recommendations for Further Study

Further study is needed to compare the RASPerS participants in the extreme groups (minimal stress vs. extremely high stress) to see what, if any, differences may exist that could be associated with lower levels of stress. Are there differences in stress perception between long-term and newly entered research administrators? Is there an association between gender and perceived levels of stress? Further study is also needed for qualitative analysis of the optional essay question, which asks why participants remain in research administration, to determine if there is any association between professional motivation and perceived levels of occupational stress.

References


**About the Authors**

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Olga Brawman-Mintzer, M.D., is professor, Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina. She also serves at the Ralph H. Johnson Veterans Administration Medical Center in both research and clinical service. Dr. Mintzer’s research interests include psychopharmacology of anxiety disorders and psychopharmacology of women.
Impact of NIH Sponsored Funding on States
Families USA

The nonprofit group, Families USA, analyzed NIH grants and contracts awarded in each state in fiscal year 2007 and the economic impact of these awards in each state.\(^1\) In fiscal year 2007, NIH awarded approximately $22.846 billion in grants and contracts to universities and other research institutions in the 50 states.

Key findings from the analysis are included below (see also Figure 160.7-1 and 160.7-2):

**Funding Amounts.** The value of NIH awards ranged widely, from $3.493 billion (California) to $7 million (Wyoming). Seven states received more than $1 billion in funding from NIH: California, Massachusetts, New York, Maryland, Pennsylvania, Texas, and North Carolina.

**Business Activity.** On average, in fiscal year 2007, each dollar of NIH funding generated more than twice as much in state economic output. That is, an overall investment of $22.846 billion from NIH generated a total of $50.537 billion in new state business activity in the form of increased output of goods and services. Business activity generated per dollar of NIH funding ranged from $2.49 (Texas) to $1.66 (South Dakota).

**Jobs and Wages.** In fiscal year 2007, NIH grants and contracts created and supported more than 350,000 jobs that generated wages in excess of $18 billion in the 50 states.

- The number of new jobs created ranged from 55,286 (California) to 127 (Wyoming). In six states, more than 20,000 new jobs were created: California, Massachusetts, New York, Maryland, Pennsylvania, and Texas.
- The increase in total wages from jobs created and supported by NIH funding ranged from $3.111 billion (California) to $5 million (Wyoming). In six states, total wages from jobs created exceeded $1 billion: California, Massachusetts, New York, Maryland, Pennsylvania, and Texas.
- The overall average wage associated with the jobs created was $52,000. The average wage per new job created by NIH funding ranged from $60,285 (Connecticut) to $38,746 (Louisiana). On average, wages associated with jobs created by NIH funding are nearly 25 percent higher than the average U.S. wage.

\(^1\) Reprinted from In Your Own Backyard: How NIH Funding Helps Your State’s Economy, a report by Families USA’s Global Health Initiative, June 2008, http://familiesusa.org/resources/publications. The material is used with permission of the publisher. (Note: NIH spending for 2007 is based on the 2007 federal fiscal year. The report includes a “Methodology” section that explains how NIH total awards for fiscal year 2007 were derived.)
### Figure 160.7-1: Economic Benefits* of NIH Awards to States, Fiscal Year 2007

<table>
<thead>
<tr>
<th>State</th>
<th>NIH Award (in millions of dollars)</th>
<th>Business Activity Multiplier (per $1 change in NIH award)</th>
<th>Total New Business Activity (in millions of dollars)***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
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<td>$614</td>
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<td>$20</td>
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<td>Wyoming</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$22,846</strong></td>
<td></td>
<td><strong>$50,537</strong></td>
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<tr>
<td><strong>Average</strong>*</td>
<td></td>
<td>2.21</td>
<td></td>
</tr>
</tbody>
</table>

* Value of additional state business activity attributed to NIH grants and contracts awarded to academic institutions, organizations, and businesses in the state, measured in terms of the dollar value of goods and services, rounded to the nearest million dollars.

*** Total new business activity may not equal the NIH award multiplied by the business activity multiplier due to rounding.

The “average” multiplier per NIH dollar (2.21) is the sum of total new business activity divided by the sum of NIH awards.

Source: *In Your Own Backyard: How NIH Funding Helps Your State’s Economy*, Table 1, Families USA’s Global Health Initiative, June 2008, http://familiesusa.org/resources/publications.
Figure 160.7-2: Jobs and Wages Attributed to NIH Awards, Fiscal Year 2007*

<table>
<thead>
<tr>
<th>State</th>
<th>NIH Award (in million of dollars)</th>
<th>Total New Jobs Created and Supported **</th>
<th>Total Wages From New Jobs (in millions of dollars)</th>
<th>Average Wage Per Job Created</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alabama</td>
<td>$285</td>
<td>4,798</td>
<td>$228</td>
<td>$47,567</td>
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<td>$70</td>
<td>$39,081</td>
</tr>
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<td>$292</td>
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<td>$218</td>
<td>$44,011</td>
</tr>
<tr>
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<td>21,262</td>
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</tr>
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<td>$91</td>
<td>$44,940</td>
</tr>
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<td>2,479</td>
<td>$101</td>
<td>$40,750</td>
</tr>
<tr>
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<td>$16</td>
<td>193</td>
<td>$8</td>
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</tr>
<tr>
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<td>7,704</td>
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<td>20,148</td>
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<td>$50,299</td>
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<tr>
<td>Utah</td>
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<tr>
<td>Vermont</td>
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<tr>
<td>Virginia</td>
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<td>Washington</td>
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<td>$54,206</td>
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<tr>
<td>West Virginia</td>
<td>$24</td>
<td>394</td>
<td>$16</td>
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<tr>
<td>Wisconsin</td>
<td>$396</td>
<td>6,603</td>
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<td>$47,729</td>
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<tr>
<td>Wyoming</td>
<td>$7</td>
<td>127</td>
<td>$5</td>
<td>$39,714</td>
</tr>
<tr>
<td>** Total</td>
<td>$22,846</td>
<td>350,894</td>
<td>$18,286</td>
<td>$52,112</td>
</tr>
</tbody>
</table>

* State NIH awards and total wages are rounded to the nearest million dollars. Jobs are rounded to the nearest whole number. Total new jobs and wages may not equal the NIH award multiplied by the relevant multiplier due to rounding.

** In order to calculate the impact of NIH awards on employment, 2007 NIH award data were deflated to 2005 levels in order to be consistent with the BLS employment multipliers, which are based on 2005 data. Data were adjusted using a deflator of 0.919, which is based on the Bureau of Economic Analysis’ index for biomedical research and development (BiRD).

*** The average wage ($52,112) is the sum of the total wages from new jobs divided by the total number of new jobs.

Source: In Your Own Backyard: How NIH Funding Helps Your State’s Economy, Table 1, Families USA’s Global Health Initiative, June 2008, http://familiesusa.org/resources/publications.
Public Attitudes Toward Scientific Research
National Science Foundation

The National Science Board’s Science and Engineering Indicators provides “a broad base of quantitative information on the U.S. and international science and engineering enterprise.” One set of data, discussed in Chapter 7, pertains to: public attitudes toward science and technology (www.nsf.gov/statistics/seind10/c7/c7h.htm).

Some key findings from the NSF’s data are included below and at Figures 160.8-1 through 160.8-3:

- **Americans consistently endorse the past achievements and future promise of science and technology.** In 2008, 68% of Americans said that the benefits of scientific research have strongly outweighed the harmful results, and only 10% said harmful results slightly or strongly outweighed the benefits. Nearly 9 in 10 Americans agree with the statement “because of science and technology, there will be more opportunities for the next generation.” However, nearly half of Americans agree that “science makes our way of life change too fast.”

- **Support for government funding of scientific research is strong.** In 2008, 84% of Americans expressed support for government funding of basic research. More than one-third of Americans (38%) said in 2008 that the government spends too little on scientific research and 11% said the government spends too much. (Other kinds of federal spending such as health care and education generate stronger public support.)

- **The public expresses confidence in science leaders.** In 2008, more Americans expressed a “great deal” of confidence in scientific leaders than in the leaders of any other institution except the military.
Figure 160.8-1: Basic Research Funding, 1985-2008

Topic A: Government should fund basic research


Source: Reprinted from National Science Foundation, Science and Engineering Indicators 2010 (figure 7-14), www.nsf.gov/statistics/seind10/c7/c7h.htm. (National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (years through 2001); University of Michigan, Survey of Consumer Attitudes (2004 in left panel); and University of Chicago, National Opinion Research Center, General Social Survey.)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
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<td>Strongly agree</td>
<td>9</td>
<td>16</td>
<td>18</td>
<td>14</td>
<td>14</td>
<td>17</td>
<td>21</td>
<td>19</td>
<td>29</td>
<td>32</td>
<td>25</td>
</tr>
<tr>
<td>Agree</td>
<td>70</td>
<td>65</td>
<td>63</td>
<td>63</td>
<td>63</td>
<td>61</td>
<td>61</td>
<td>62</td>
<td>53</td>
<td>55</td>
<td>59</td>
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<tr>
<td>Disagree</td>
<td>16</td>
<td>14</td>
<td>15</td>
<td>18</td>
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<td>17</td>
<td>13</td>
<td>14</td>
<td>15</td>
<td>8</td>
<td>11</td>
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<tr>
<td>Strongly disagree</td>
<td>*</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

Notes: Table includes all years for which data collected. Detail may not add to total because of rounding. Number of respondents varies, from between 1,500 and 2,000 per year.


Topic B: Even if it brings no immediate benefits, scientific research that advances the frontiers of knowledge is necessary and should be supported by the federal government.

April 2010

Sponsored Research Administration
Figure 160.8-2: Spending for Scientific Research

Topic C: Assessment of government spending for scientific research


Source: Reprinted from National Science Foundation, Science and Engineering Indicators 2010 (figure 7-14), www.nsf.gov/statistics/seind10/c7/c7h.htm. (National Science Foundation, Division of Science Resources Statistics, Survey of Public Attitudes Toward and Understanding of Science and Technology (years through 2001); University of Michigan, Survey of Consumer Attitudes (2004 in left panel); and University of Chicago, National Opinion Research Center, General Social Survey.)
**Figure 160.8-3: Research Involving Animals**

*Topic D: Scientists should be allowed to do research that causes pain and injury to animals like dogs and chimpanzees if it produces new information about human health problems*

![Graph showing the percentage of agreement and disagreement over years](image)


2010 Profile of a Research Administrator\(^1\)
Jennifer Shambrook, St. Jude Children’s Research Hospital and Thomas J. Roberts, Florida Gulf Coast University

Abstract
This paper expands upon the seminal work of Roberts and House, which described the first empirical study of the demographic profile of a research administrator. The original work was based upon data from the 2005 Research Administrator Survey (RAS), a regional study of research administrators in the southeastern United States (see ¶160.6). In this paper, nationwide demographic data from the 2010 Research Administrators Stress Perception Survey (RASPerS) are compared to the 2005 RAS data. These comparisons revealed that the general profile of a research administrator continues to be overwhelmingly female (80.1%), holding a higher education degree (88.7%), and aged 40–49 years (31.9%). The 2010 data showed an extremely significant difference in the modal salary level, which increased from $50,000 to $74,999 (40.0%). In 2005, the increase was from $40,000 to $50,000 (23%). Level of education was slightly higher in 2010 than in 2005, with more research administrators holding both bachelor’s and master’s degrees. Additional demographic and social data are described from the 2010 RASPerS. These include both work and non-work factors. These data are offered to provide information that may be useful for others with an interest in expanding the body of knowledge about the profession of research administration.

Introduction
While a body of information is constantly growing pertaining to what research administrators do, or are supposed to do, little has been done to date to describe who research administrators are as a profession. As pointed out by Beasley (2006), this emerging profession really came into being in the 1940s after Vannevar Bush persuaded President Franklin Delano Roosevelt to create an agency that would coordinate collaboration between federal and civilian laboratories. Hanson and Moreland (2004) reflected upon the conundrum research administrators face in their constant balancing between the sometimes competing demands of sponsoring agencies and over-worked academic researchers. Research administrators must assume many roles, perform both complex and mundane functions, and act as a liaison with both internal and external parties. It takes a multi-talented and mission-dedicated individual to thrive or succeed in the profession. And, as shown in the 2007 RASPerS (Shambrook & Brawman-Mintzer, 2007), research administrators perceive this work to often be done in a stressful environment with little recognition from their non-administrative colleagues to whom they are providing a service (see ¶160.7).

\(^1\)This article is reprinted from Research Management Review, Vol. 18, No. 1, Spring/Summer 2011, published by the National Council of University Research Administrators. It is used with permission of the publisher.
“Research administrators must assume many roles, perform both complex and mundane functions, and act as a liaison with both internal and external parties. It takes a multi-talented and mission-dedicated individual to thrive or succeed in the profession.”

Who are the people who make up this profession? Prior to the 2006 publication by Roberts and House, solid empirical demographic data did not exist for research administrators. In this paper, we update this seminal work using more recent national, rather than regional, data. Comparisons are made that both serve to validate the original work and reveal some differences that indicate professional trends. Finally, additional demographic factors have been added that provide baseline data for additional studies that may seek to expand the body of knowledge about this emerging profession.

Methods
Both the RAS (Roberts, 2005) and 2010 RASPerS (Shambrook, 2010) recruited participants from a closed population of research administrators who were members of the National Council of Research Administrators (NCURA). The RAS recruited solely from NCURA Region III, which is comprised of eleven Southeastern states and the Territory of Puerto Rico. Through the selection and randomization process described in Roberts and House (2006), there were 277 potential study participants for the electronic survey. The usable return rate was 83%, with 226 total survey participants. Thus, with a confidence level of 99%, the confidence interval was 3.69.

The 2010 RASPerS (Shambrook, 2010) modeled several demographic factors after the 2005 RAS in order to make valid comparisons, but expanded recruitment to include the entire nationwide membership of NCURA. Expanding the catchment area for recruitment was a recommendation for future study in the 2006 RAS article Roberts and House (2006). The 2010 RASPerS also sought to make comparisons with Behavioral Risk Factor Surveillance Survey (BRFSS) data from the U.S. Centers for Disease Control and Prevention (CDC). Therefore, some factors were somewhat adjusted in the survey (e.g., salary ranges) and others were added (e.g., ethnic heritage and marital status). It was the intent of the 2010 RASPerS questionnaire to generate data that could be compared with data from both previous surveys (RAS and BRFSS). The National Institute of Occupational Safety and Health (NIOSH, n.d.) Non-Work Factors Scale from the NIOSH Generic Job Stress Questionnaire was used to collect information about other commitments (e.g., eldercare or pursuing another academic degree).

The composite 2010 RASPerS questionnaire consists of 12 components which include demographic data, non-work activities, three instruments for health behaviors, and seven stress-related instruments. These are preceded by an introduction, participant rights statement, and statement of consent.

The data collection process began with an email to the entire membership of NCURA with a link to the 2010 RASPerS electronic survey. The total population of the NCURA membership was 6,232 at the time of the survey in February 2010. A total of 1,188 participants took portions of the survey. As comparisons were being drawn
between multiple factors of the survey, the N varied among the 12 survey instruments which were combined to make up the composite survey. However, for a 99% confidence level with a confidence interval of 4.0, only 891 responses were needed and over 1,000 responses were collected for each of the instruments, generating a 99% level of confidence and confidence intervals of less than 4.0 for each instrument.

Approved protocols for human participant protections were in place by the appropriate Institutional Review Boards for the RAS at the University of Central Florida and 2010 RASPerS at Walden University. Data were analyzed using both descriptive and inferential techniques. Frequencies and percentages are shown for all factors. Fisher’s Exact Test was used in comparing two factors and Cochran-Armitage Trend Test was used for multiple factors to determine statistical level of significance.

Results

Work-Related Factors. Work-related data gathered by the 2010 RASPerS included primary research administration role, number of years in research administration, certified research administrator status, annual salary, usual number of hours worked per week, and health insurance status. These data are shown at Table 1.

<table>
<thead>
<tr>
<th>Table 1. Work-related Factors as Shown in 2010 RASPerS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-Related Factor</td>
</tr>
<tr>
<td>Primary Research Administration Role</td>
</tr>
<tr>
<td>Department Administrator</td>
</tr>
<tr>
<td>Pre-Award</td>
</tr>
<tr>
<td>Post-Award Accounting</td>
</tr>
<tr>
<td>Research Integrity/Compliance</td>
</tr>
<tr>
<td>Other</td>
</tr>
<tr>
<td>Total N</td>
</tr>
<tr>
<td># of Years in Research Administration</td>
</tr>
<tr>
<td>&lt; 1 year</td>
</tr>
<tr>
<td>1 &lt; 5 years</td>
</tr>
<tr>
<td>5 &lt; 10 years</td>
</tr>
<tr>
<td>10 &lt; 20 years</td>
</tr>
<tr>
<td>20 years</td>
</tr>
<tr>
<td>Total N</td>
</tr>
<tr>
<td>Certified Research Administration status</td>
</tr>
<tr>
<td>Yes</td>
</tr>
<tr>
<td>No</td>
</tr>
<tr>
<td>Total N</td>
</tr>
</tbody>
</table>

continued
Table 1. Work-related Factors as Shown in 2010 RASPerS, continued

<table>
<thead>
<tr>
<th>Work-related Factor</th>
<th>Frequency</th>
<th>% Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Annual Salary as a Research Administration</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; $35,000</td>
<td>29</td>
<td>2.5%</td>
</tr>
<tr>
<td>$35,000 – $49,999</td>
<td>205</td>
<td>18.0%</td>
</tr>
<tr>
<td>$50,000 – $74,999</td>
<td>455</td>
<td>40.0%</td>
</tr>
<tr>
<td>$75,000 – $99,999</td>
<td>246</td>
<td>21.6%</td>
</tr>
<tr>
<td>&gt; $100,000</td>
<td>203</td>
<td>17.8%</td>
</tr>
<tr>
<td><strong>Total N</strong></td>
<td>1,138</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Hours Worked per Week</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 40</td>
<td>281</td>
<td>24.5%</td>
</tr>
<tr>
<td>40 &lt; 45</td>
<td>332</td>
<td>28.9%</td>
</tr>
<tr>
<td>45 &lt; 50</td>
<td>300</td>
<td>26.1%</td>
</tr>
<tr>
<td>50 &lt; 60</td>
<td>193</td>
<td>16.8%</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>42</td>
<td>3.7%</td>
</tr>
<tr>
<td><strong>Total N</strong></td>
<td>1,148</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Health Insurance status</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1,120</td>
<td>99.5%</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>.5%</td>
</tr>
<tr>
<td><strong>Total N</strong></td>
<td>1,126</td>
<td>100%</td>
</tr>
</tbody>
</table>

As shown in Table 1, there is a broad distribution across research administrator roles with fairly even distribution between department administrators (30.3%) and pre-award administrators (29.6%); post-award accounting (18.1%) and all other (18.8%); about 3.1% were working in research integrity or compliance roles.

The mode for number of years in research administration was 10 < 20 years (30.7%). The percentage with 5 < 10 years (26.5%) and 1 < 5 years (25.1%) were very similar to one another. Only 2.3% had less than 1 year of experience. There were 15.3% with 20 or more years of experience as research administrators. Health insurance was held by 99.5% of the participants. Only 14.1% indicated that they held credentials as Certified Research Administrators. The mode annual salary was $50,000 to $74,999. Less than 3% earned salaries of less than $35,000. A total of 17.8% reported salaries of over $100,000. This is comparable to data reported by the Bureau of Labor Statistics (BLS), U.S. Department of Labor, which shows the median annual income for all professionals at $59,748 and for all full-time employees with a bachelor’s degree or higher at $60,216 (Bureau of Labor Statistics, 2010).

The mode for hours usually worked per week was from 40 to 45 hours (28.9%). This was followed closely (26.1%) by those working 45 < 50 hours per week. A total of 16.8% reported routinely working from 50 < 60 hours per week and 3.7% reported working 60 or more hours per week.

**Social Demographic Factors.** Social demographic information gathered by the 2010 RASPerS included gender, age, race/ethnic group, marital status, and highest level of educational achievement. These data are shown in Table 2.
### Table 2. Social Demographic Factors as Shown by 2010 RASPerS

<table>
<thead>
<tr>
<th>Social Demographic Factor</th>
<th>Frequency</th>
<th>% Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>915</td>
<td>80.1%</td>
</tr>
<tr>
<td>Male</td>
<td>228</td>
<td>19.9%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,143</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 30</td>
<td>87</td>
<td>7.6%</td>
</tr>
<tr>
<td>30–39</td>
<td>266</td>
<td>23.2%</td>
</tr>
<tr>
<td>40–49</td>
<td>365</td>
<td>31.9%</td>
</tr>
<tr>
<td>50–59</td>
<td>331</td>
<td>28.9%</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>96</td>
<td>8.4%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,138</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Race/Ethnic Group</strong></td>
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</tr>
<tr>
<td>Non-Hispanic White</td>
<td>954</td>
<td>83.4%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>56</td>
<td>4.9%</td>
</tr>
<tr>
<td>African-American</td>
<td>72</td>
<td>6.3%</td>
</tr>
<tr>
<td>Asian</td>
<td>41</td>
<td>3.6%</td>
</tr>
<tr>
<td>Native Hawaiian or Pacific Islander</td>
<td>3</td>
<td>0.3%</td>
</tr>
<tr>
<td>Native American</td>
<td>10</td>
<td>0.9%</td>
</tr>
<tr>
<td>Prefer not to answer</td>
<td>24</td>
<td>2.1%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,144</td>
<td>100%</td>
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<tr>
<td><strong>Marital Status</strong></td>
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<tr>
<td>Married</td>
<td>745</td>
<td>65.5%</td>
</tr>
<tr>
<td>Partnered</td>
<td>60</td>
<td>5.3%</td>
</tr>
<tr>
<td>Separated</td>
<td>12</td>
<td>1.1%</td>
</tr>
<tr>
<td>Divorced</td>
<td>141</td>
<td>12.4%</td>
</tr>
<tr>
<td>Widowed</td>
<td>13</td>
<td>1.1%</td>
</tr>
<tr>
<td>Never Married</td>
<td>167</td>
<td>14.7%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,138</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Highest Level of Educational Achievement</strong></td>
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<td></td>
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<tr>
<td>High school or GED</td>
<td>7</td>
<td>0.6%</td>
</tr>
<tr>
<td>Some college credit</td>
<td>90</td>
<td>7.9%</td>
</tr>
<tr>
<td>Associate’s degree</td>
<td>31</td>
<td>2.7%</td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>475</td>
<td>41.4%</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>428</td>
<td>37.3%</td>
</tr>
<tr>
<td>Doctoral degree</td>
<td>115</td>
<td>10.0%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,146</td>
<td>100%</td>
</tr>
</tbody>
</table>

RASPerS 2010 national data show that research administration is a profession that is 80.1% female. The modal age group was 40–49 years, at 31.9%, closely followed by 50–59 years at 28.9%. Only 30.8% were under 40 years of age. Over 70% of research administrators reported being either married (65.5%) or partnered (5.3%). A total of 1.1% reported being widowed; 14.7% reported having never been mar-
ried; and only 13.5% were either separated (1.1%) or divorced (12.4%). These data reflect a similar distribution to that reported by the Pew Charitable Trusts (PEW), with 64% of college-educated adults being married (Pew Charitable Trusts, 2010).

Research administrators overwhelmingly reported educational achievement of bachelor’s degree or higher at 88.7%. Of the 11.3% without a higher degree, 10.7% reported having either some college (7.9%) or an associate’s degree (2.7%). Less than one percent (0.6%) reported only having a high school education or GED, or only seven out of 1,146 participants. Master’s degrees were held by 37.3% and doctoral degrees were held by 10%.

NIOSH Non-Work Factors. Additional non-work demographic factors were measured in the 2010 RASPerS which were considered as possible contributing factors to overall stress (NIOSH, n.d.). These factors are offered here to further describe the demographic make-up of research administrators shown in Table 3. These factors include participant reporting of an additional job; children in the home; primary responsibility for childcare duties, house-cleaning duties, or care for an elderly or disabled person; current enrollment in courses for a degree; and/or a high level of time commitment to volunteer work.

<table>
<thead>
<tr>
<th>NIOSH Non-Work Factor</th>
<th>Frequency</th>
<th>% Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Additional Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>163</td>
<td>14.3%</td>
</tr>
<tr>
<td>No</td>
<td>976</td>
<td>85.7%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,139</td>
<td>100%</td>
</tr>
<tr>
<td>Children at Home</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>467</td>
<td>40.9%</td>
</tr>
<tr>
<td>No</td>
<td>676</td>
<td>59.1%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,143</td>
<td>100%</td>
</tr>
<tr>
<td>Primary Responsibility for Childcare Duties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>298</td>
<td>26.2%</td>
</tr>
<tr>
<td>No</td>
<td>839</td>
<td>73.8%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,137</td>
<td>100%</td>
</tr>
<tr>
<td>Primary Responsibility for House-cleaning Duties</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>844</td>
<td>74.2%</td>
</tr>
<tr>
<td>No</td>
<td>293</td>
<td>25.8%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,143</td>
<td>100%</td>
</tr>
<tr>
<td>Primary Responsibility for Care of Elderly or Disabled Person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>116</td>
<td>10.1%</td>
</tr>
<tr>
<td>No</td>
<td>1,027</td>
<td>89.9%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,143</td>
<td>100%</td>
</tr>
</tbody>
</table>
Table 3. NIOSH Non-Work Factors as Shown by 2010 RASPerS

<table>
<thead>
<tr>
<th>NIOSH Non-Work Factor</th>
<th>Frequency</th>
<th>% Population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Currently Enrolled in Courses for Credit toward a Degree</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>163</td>
<td>14.3%</td>
</tr>
<tr>
<td>No</td>
<td>977</td>
<td>85.7%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,140</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Volunteer Work of at Least 5–10 Hours per Week</th>
<th>Frequency</th>
<th>% Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>305</td>
<td>26.9%</td>
</tr>
<tr>
<td>No</td>
<td>829</td>
<td>73.1%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,134</td>
<td>100%</td>
</tr>
</tbody>
</table>

Participants reporting having extensive non-family related commitments included 14.3% having an additional job and 14.3% being currently enrolled in courses leading to a degree. A higher percentage, 26.9%, reported devoting at least 5–10 hours each week to volunteer work in addition to their research administration jobs.

Children living in the home were reported by 40.9% of the participants, but only 26.2% reported having primary responsibility for childcare duties. Primary responsibility for care of an elderly or disabled person was reported by 10.1%. Participants overwhelmingly reported having primary responsibility for house-cleaning duties at 74.2%.

Comparisons of 2005 RAS and 2010 RASPerS. Table 4 shows a comparison between the regional 2005 RAS and the national 2010 RASPerS. The purpose of this analysis was to determine the validity of the 2005 RAS regional data by comparison with the 2010 RASPerS national data. A $p$-value equal to or less than 0.05 indicates a significant difference between data sets. As shown in Table 4, no significant difference is shown among gender, age, or education when comparing the results of the two data sets. There is a weak (non-significant) difference in education, which indicates that a trend may be developing toward higher educational attainment.

The only significant difference shown was in the area of salaries, which were significantly higher in 2010 than in 2005. In 2005, only six out of ten participants reported having annual earnings of greater than $50,000; in 2010, eight out of ten reported having earnings greater than $50,000 per year. This indicates an extremely significant difference between annual incomes reported for 2005 and 2010.
### Table 4. Comparison of Selected Demographic Factors from 2005 RAS and 2010 RASPerS

<table>
<thead>
<tr>
<th>Demographic Factor</th>
<th>2005 RAS N (%)</th>
<th>2010 RASPerS N (%)</th>
<th>Significance P value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Female</td>
<td>172 (76%)</td>
<td>915 (80%)</td>
<td>0.18&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>• Male</td>
<td>54 (24%)</td>
<td>228 (20%)</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>226 (100%)</td>
<td>1,143 (100%)</td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• &lt;30</td>
<td>7 (3%)</td>
<td>87 (7.6%)</td>
<td>0.47&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>• 30-39</td>
<td>55 (24%)</td>
<td>266 (23.2%)</td>
<td></td>
</tr>
<tr>
<td>• 40-49</td>
<td>82 (36%)</td>
<td>365 (31.9%)</td>
<td></td>
</tr>
<tr>
<td>• 50-59</td>
<td>66 (29%)</td>
<td>331 (28.9%)</td>
<td></td>
</tr>
<tr>
<td>• ≥60</td>
<td>16 (8%)</td>
<td>96 (8.4%)</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>226 (100%)</td>
<td>1,145 (100%)</td>
<td></td>
</tr>
<tr>
<td><strong>Highest Level of Educational Achievement</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• High school or GED</td>
<td>5 (2%)</td>
<td>7 (0.6%)</td>
<td>0.057&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>• Some college credit</td>
<td>29 (13%)</td>
<td>90 (7.9%)</td>
<td></td>
</tr>
<tr>
<td>• Associate’s degree</td>
<td>3 (1%)</td>
<td>31 (2.7%)</td>
<td></td>
</tr>
<tr>
<td>• Bachelor’s degree</td>
<td>89 (40%)</td>
<td>475 (41.4%)</td>
<td></td>
</tr>
<tr>
<td>• Master’s degree</td>
<td>73 (32%)</td>
<td>428 (37.3%)</td>
<td></td>
</tr>
<tr>
<td>• Doctoral degree</td>
<td>27 (12%)</td>
<td>115 (10.0%)</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>226 (100%)</td>
<td>1,146 (100%)</td>
<td></td>
</tr>
<tr>
<td><strong>Salary as Research Administrator</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• &lt; $50,000/year</td>
<td>86 (39%)</td>
<td>234 (21%)</td>
<td>&lt;0.0001&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>• ≥ $50,000/year</td>
<td>136 (61%)</td>
<td>954 (79%)</td>
<td></td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td>222 (100%)</td>
<td>1,138 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>: Fisher’s Exact Test p-values  
<sup>b</sup>: Cochran-Armitage Trend Test p-value

Notes:
Gender and Age distribution does not seem to change from 2005 to 2010. There seems to be some evidence of an overall trend of having higher level of education in 2010 compared to 2005, while this finding is not strong. There is a significant change from 2005 to 2010 in salary, where every 8 out of 10 people have salaries above $50,000 in 2010 while only 6 out of 10 did so in 2005.

### Conclusion

The regional 2005 RAS data are supported and validated by the national 2010 RASPerS with respect to age, gender, and education. There is an extremely significant difference in income. This difference may be attributed, in part, to an overall 13.5% rise in national median annual income for all wage and salary earners in the U.S. (Bureau of Labor Statistics, 2010).

Research administrators may be described as a nearly homogenous group who are overwhelmingly university degreeed (88.7%), female (80.1%), earning an annual income of over $50,000 (79.4%), with a majority over 40 years of age (69.2%). Other demographic factors show research administrators to be either married (65.5%) or...
partnered (5.3%), having more than five years of experience in research administration (72.6%), and working more than 40 hours per week (75.5%). Research administrators overwhelmingly have health insurance coverage (99.5%).

**Recommendations for Further Study**

The demographic profile of research administrators may be used as foundational information in the further study of this or similar occupational groups. Further study is recommended of possible associations among salary, gender, ethnicity, and other demographic factors.

**Acknowledgments**

The authors thank Mehmet Kocak, M.S., Senior Biostatistician, Department of Biostatistics/Pediatric Brain Tumor Consortium, St. Jude Children’s Research Hospital, for assistance with statistical analysis of Table 4 data. The authors also wish to thank the 2005 and 2010 Executive Boards of the National Council of University Research Administrators who generously allowed us the use of their membership database to conduct both the 2005 RAS and the 2010 RASPerS.

**Literature Cited**


About the Authors

Jennifer Shambrook, Ph.D., currently serves as director, Grants & Contracts Management Office, St. Jude Children’s Research Hospital, Memphis, Tennessee. She began her career in research administration in 1986 at the University of Alabama at Birmingham. She is the principal investigator for both the 2007 and 2010 Research Administrator Stress Perception Surveys. Her research focus is on reducing stress, increasing stress resiliency, and promoting good health behavior in the work environment.

Thomas J. Roberts, Ed.D., is the Associate Vice President for Research, Florida Gulf Coast University, Fort Myers, Florida. He has been a professional research administrator for over 20 years and has worked at various types of institutions, including comprehensive, doctoral-granting, medical school, and major research university environments. He authored the first doctoral dissertation focusing specifically on the field of research administration. Dr. Roberts earned his doctorate in educational leadership from the University of Central Florida.
Research Administration Salaries: How Do We Measure Up?
Jennifer Shambrook, St. Jude Children’s Research Hospital

Research As research administrators, we think about money all the time. How can we get more money for our research? How much money are we cost sharing? How much money have we spent this year? How much money have we received in awards? How much money is left for a no cost extension? Money, money, money! But that is OPM – other people’s money. Let’s take a moment to think about the money you are paid for securing, managing, accounting for, or reporting on OPM. How are we doing individually and as a profession?

Research Administration Salaries
The 2010 Research Administrators Stress Perception Survey (2010 RASPerS) collected salary information from over 1,138 research administrators across the country. The data from the survey showed that about 80% of research administrators have annual salaries of over $50,000. As shown in Table 1, 40% of research administrators earn within the range of $50,000 to $74,999 per year. Fewer than 3% earn less than $35,000 and almost 18% earn over $100,000 as research administrators. How does this compare with similar professions?

Comparison with Other U.S. Workers
Salary data from the U.S. Bureau of Labor Statistics (BLS) give us some benchmarks with which to compare ourselves. The BLS reported the median annual earnings of all U.S. fulltime workers at $38,740. For those of you for whom it’s been a while since your last statistics course, the median means that half of all workers make higher than that amount and half of all workers make lower than that amount.

Table 1: Research Administration Salaries

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>$50,000 to $74,999</td>
<td>40%</td>
</tr>
<tr>
<td>$35,000 to $49,999</td>
<td>18%</td>
</tr>
<tr>
<td>$30,000 to $34,999</td>
<td>5%</td>
</tr>
<tr>
<td>$25,000 to $29,999</td>
<td>3%</td>
</tr>
<tr>
<td>$20,000 to $24,999</td>
<td>2%</td>
</tr>
</tbody>
</table>

The 2010 RASPerS data show where we fall within five salary ranges, rather than actual salary amounts for each individual. From the RASPerS data we can see that at least 2.6% are in a salary range that is lower than the U.S. median of $38.7K. There were 18.0% reporting their earnings were in the $35-49.9K range. Of those, we can assume some would be over and some would be under the national median of $38.7K. Assuming a normal bell-shaped distribution within the $35-49.9K salary range would support the likelihood that since $38.7K falls well below the midpoint of the $35-49.9K range, more than half of the 18.0% in that $35-49.9K range are above the $38.7K point. But even putting statistical probability aside, we can clearly see that 79.4% are in salary ranges that earn $50K or more. So we can say with certainty that as a group, research administrators earn well above the U.S. median income.

Education
The 2009 U.S. Census (Educational Attainment) reports that only 29% of the U.S.

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1 This article is reprinted from the *NCURA Magazine*, Vol. XLIII, No. 3, May-June 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
has completed a college degree of bachelor’s or higher. We know from both the Research Administrator Survey (Roberts & House, 2006) and the 2010 RASPerS that research administrators are far above average when it comes to education. The 2010 RASPerS data shows 89% of research administrators have achieved bachelor’s or higher. U.S. Census data over the years consistently shows higher educational achievement is associated with higher average earnings.

The BLS reports the median for all workers with a bachelor’s degree or higher is $60,216. This can be broken down a little further to show the median for those with bachelor’s only as being at $54,288 and for those with an advanced degree as being at $71,136. Again, looking at our salary ranges in Table 1, we find 40% are in the same range of the median salaries for those with higher education degrees, and another 39.4% earning salaries in the two higher ranges. With that, I believe we can feel comfortable with our salaries being in line with our educational levels.

Table 1: Annual Salaries for Research Administrators as Reported in the 2010 RASPerS

<table>
<thead>
<tr>
<th>Annual Salary</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$35,000</td>
<td>29</td>
<td>2.6%</td>
</tr>
<tr>
<td>$35,000 - $49,999</td>
<td>205</td>
<td>18.0%</td>
</tr>
<tr>
<td>$50,000 - $74,999</td>
<td>455</td>
<td>39.9%</td>
</tr>
<tr>
<td>$75,000 - $99,999</td>
<td>246</td>
<td>21.6%</td>
</tr>
<tr>
<td>&gt;$100,000</td>
<td>203</td>
<td>17.9%</td>
</tr>
<tr>
<td>Total N</td>
<td>1,138</td>
<td>100%</td>
</tr>
</tbody>
</table>

Responsibility

Another characteristic which we might use to view our salaries is the area of responsibility. While 29% may have college degrees, all degreed occupations do not have the same earning power. The BLS reports those in management, business, and financial operations occupations generally earn more than those in sales or professional occupations. The median income for management, business and financial operations occupations is $59,748; for sales is $33,124; and for professional occupations is $52,520. Again, looking back at Table 1, we see that most research administrators are in salary ranges that either meet or exceed the median salaries for those in management, business and financial operations.

Gender Considerations

The salaries discussed above consider the median or mean earnings of all workers. One cannot consider salary without bearing in mind the gender bias that is still alive and well in the workplace today. This is an especially important factor when discussing an occupational group that is comprised of a population that is about 80% female with a reported gender bias present (Shambrook, Roberts & Triscari, 2010.) The U.S. Census Bureau reports the ratio for women’s earnings to men’s earnings was 78.2%. Stated in monetary terms, for every dollar a man earns, a woman in a similar situation will earn about 78 cents. Table 2 shows the median earnings for men, for women and what we should expect to see for the 80/20 female/male mix
found in research administration when adjusted for gender.

When comparing the salaries reported in the 2010 RASPerS with the median salaries reported by the BLS, it can be said that, as a profession, research administrators appear to be earning at or above the median salary range for our educational level and area of responsibility even before adjusting for gender.

### Table 2: Median Annual Income for Workers with Bachelor’s Degree, Advanced Degree, or Working in Management, Business, and Financial Operations, Divided by Gender and Gender Adjusted for Research Administration

<table>
<thead>
<tr>
<th></th>
<th>Bachelor’s Degree</th>
<th>Advanced Degree</th>
<th>Management, Business, and Financial Operations</th>
</tr>
</thead>
<tbody>
<tr>
<td>All workers</td>
<td>$54,288</td>
<td>$71,136</td>
<td>$59,748</td>
</tr>
<tr>
<td>Male workers</td>
<td>$63,284</td>
<td>$80,236</td>
<td>$68,016</td>
</tr>
<tr>
<td>Female workers</td>
<td>$47,268</td>
<td>$62,088</td>
<td>$51,116</td>
</tr>
<tr>
<td>RA gender adjusted</td>
<td>$50,471</td>
<td>$65,718</td>
<td>$54,496</td>
</tr>
</tbody>
</table>

### RA Roles

Research administrators perform different primary functions. Table 3 illustrates the responses to the 2010 RASPerS question: “What is your primary role in research administration?” segregated by salary range. Research administrators working in pre-award and post-award have a significantly higher likelihood of being in the lower salary ranges than those serving as departmental administrators, research ethics and compliance or other roles. Those in research ethics and compliance and “other” RA roles are represented with greater percentages in the two highest salary ranges. Department administrators had 41.4% in the highest two salary ranges. Those in pure pre- or post-award each had around 30% in the highest two ranges.

### Table 3: Responses Salary Ranges Segregated by Research Administration Role

<table>
<thead>
<tr>
<th>Salary Range</th>
<th>Department Administrator (%)</th>
<th>Pre-Award (%)</th>
<th>Post-Award (%)</th>
<th>Research Ethics and Compliance (%)</th>
<th>Other (%)</th>
<th>Response Totals (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;$35,000</td>
<td>0.9% (3)</td>
<td>3.0% (10)</td>
<td>5.8% (12)</td>
<td>0.0% (0)</td>
<td>1.9% (4)</td>
<td>2.6% (29)</td>
</tr>
<tr>
<td>$35,000 - $49,999</td>
<td>11.3% (39)</td>
<td>26.2% (88)</td>
<td>23.2% (48)</td>
<td>22.9% (8)</td>
<td>10.3% (22)</td>
<td>18.0% (205)</td>
</tr>
<tr>
<td>$50,000 - $74,999</td>
<td>46.5% (161)</td>
<td>39.6% (133)</td>
<td>41.5% (86)</td>
<td>22.9% (8)</td>
<td>31.0% (66)</td>
<td>39.9% (454)</td>
</tr>
<tr>
<td>$75,000 - $99,999</td>
<td>24.6% (85)</td>
<td>18.8% (63)</td>
<td>18.4% (38)</td>
<td>14.3% (5)</td>
<td>25.8% (55)</td>
<td>21.6% (245)</td>
</tr>
<tr>
<td>&gt;$100,000</td>
<td>16.8% (58)</td>
<td>12.5% (42)</td>
<td>11.1% (23)</td>
<td>40.0% (14)</td>
<td>31.0% (66)</td>
<td>17.9% (203)</td>
</tr>
<tr>
<td>Total N</td>
<td>346</td>
<td>336</td>
<td>207</td>
<td>35</td>
<td>213</td>
<td>1,137</td>
</tr>
</tbody>
</table>

### Benefits

Employee benefits vary from institution to institution, but we do have one measure of employee benefits that was collected in the 2010 RASPerS: health insurance. Just prior to data collection for the 2010 RASPerS, the 2009 American Community Survey reported that 20.6% of the total U.S. civilian population between the ages of 18 and 64 years old did not have health insurance. For those employed full time, the number dropped to 13.4% uninsured. Only 6.4% of those with a bachelor’s degree
or higher were without health insurance. The 2010 RASPerS showed that only less than one percent of research administrators were uninsured. Of the 1,126 research administrators responding to the question about health insurance status, 99.5% indicated they had health insurance.

**So, How Are We Doing?**

Looking at all of this together, whether looking at comparisons with all occupations, or by educational attainment, and even when accounting for gender bias, it looks like we are doing quite well as a profession. Our salaries tend to be above the median when compared against all occupations, or against those with similar educational achievement. Our salaries appear to be higher that would be expected considering our gender composition of 80% female. Additionally, we have benefits that are significantly better than the national norm. All that, and we get to participate in a profession that helps move the body of knowledge forward for the benefit of the quality of life for all mankind. For me, I’ll feel some satisfaction in that, then turn my attention back to OPM.

**References**


2009 ACS Health Insurance Coverage Status, U.S. Census Bureau.

2009 ACS Educational Attainment, U.S. Census Bureau.


**About the Author**

Jennifer Shambrook serves as Director of the Grant & Contract Management Office at St. Jude Children’s Research Hospital. She is keenly interested in research administration as an emerging occupation and is the author of the 2007 and 2010 RASPerS (see ¶160.6 and ¶160.9).
The Incidence and Types of Occupational Role Stress among University Research Administrators

Christine C. A. Katsapis, Gallaudet University

Editor’s Note: The purpose of this article was to examine role conflicts among research administrators through the lens of Hansen and Moreland’s (2004) “Janus face” of research administration. The construct of Janus, the ancient Roman god who had two faces (one that looked to the future and one to the past) seemed to this researcher to imply natural conflict. Looking back now at 2007/2008 and the data collected, it seems that perhaps the evidence that indicated the presence of role ambiguity stress may have indicated the initial changes we are seeing realized in the profession of research administration today.

Since that study was conducted, there has been an increasing amount of specialization in the field. Numerous new master’s degree programs in research administration have led to a more commonly understood curricula for the profession. NCURA held its first pre-award research administration conference in 2007—there have been five since then. Research “development” is becoming known as the precursor to pre-award. There has been an increased emphasis on the role of research administrators in ensuring the integrity of the research enterprise and assuring the public trust in research at institutions of higher education and teaching hospitals. However, one aspect of this study that this researcher believes remains a constant is that despite the diversity of the profession and its structures, research administrators continue to have much in common due to their shared professional values. Hopefully this retrospective will provide the opportunity to consider some of the natural stresses that comes from a growing profession and its role within the institutions it serves.

Please note that Christine Katsapis received the Donald Gatske Dissertation Award in 2010 from the American Association of University Administrators for her dissertation upon which this article is based. This article is being reprinted with permission from the American Association of University Administrators’ (AAUA) Journal of Higher Education Management.

Abstract

This study explored the types of stressors prevalent in the self-reports of university research administrators (URAs) and examined whether or not the degree or type of role stress was influenced by: a) the affiliation of their office unit within their institution, or b) their type. Randomly selected members of NCURA were invited via e-mail to participate in an online survey. The Occupational Stress Inventory-Revised (OSI-R) Occupational Roles Questionnaire (ORQ) (Osipow, 1998) was administered with additional questions about the URAs’ professional characteristics. The study

1 This article is reprinted from the Research Management Review, Volume 19, Issue 1, (2012), published by the National Council of University Research Administrators. It is used with permission of the publisher.
revealed that role ambiguity was present at a level indicating a high probability of maladaptive stress and/or debilitating strain. Role overload was present at mild levels. Lastly, type, office unit organizational affiliation, and years of experience did not influence the occupational stressors reported. Overall, the degree of occupational stress was indicative of a need for intervention from their institutions. The researcher recommends peer review, self-evaluation, and interventions to increase coping skills and reduce potential negative impacts on the URAs and their employers.

Introduction

University research administrators (URAs) are crucial employees for universities (Mishler, 1989). They are responsible for the administration of federally sponsored grants and contracts for colleges and universities. In this capacity they administer high-risk and high-accountability grants and contracts that represent large sums of federal dollars. They assume this administration on behalf of their institutions while simultaneously facilitating their institution’s research and extramural funding agenda (Anonymous, 1997; Atkinson, 2002; Erickson et al., 2007; Gabriele, 1998; Hansen & Moreland, 2004; Lowry & Hansen, 2001). Their jobs are characterized by constant deadlines, intense competition with other institutions for federal funds, and ongoing accountability for service to faculty, university administration, auditors, federal sponsors, and, ultimately, the American public who provide the funds given out as federal competitive grants (Erickson et al., 2007). It has been established that like other higher education occupations, URAs experience stress balancing work, home, and a healthy lifestyle (Shambrook, 2007). However, unlike other higher education occupations, there has been no study about whether or not that stress is perceived as a function of their specific occupation. There are no baseline data examining which stressors are reported by this occupation. The Occupational Stress Inventory-Revised (OSI-R) Occupational Roles Questionnaire (ORQ) has often been utilized for “executive, technical, administrative support personnel”, and types of employees to obtain role stress data (Osipow, 1998). In order to eliminate the lack of data on URA occupational stressors and fill the gap in the literature for this population of educational leaders, this study aimed to administer the ORQ to URAs and obtain baseline data for analysis and further inquiry.

URAs are associated organizationally within their institutions with organizational structures commonly named Offices of: Research Administration, Sponsored Programs, Sponsored Research, and/or University Research Services. These offices are the central location for expertise related to the application for and management of grants. The URAs within those offices are sent demands from multiple entities—the federal government, their own higher education institutions’ administrations, their colleagues, and the faculty and professional staff they serve. All of these demands arrive at varying points along the life cycle of a federal grant or contract (Coverman, 1989; Mishler, 1989). Meeting those demands can be stressful and the way in which URAs perceive the stress associated with their role is associated with higher education administration (Blankinship, 1994). Blankinship summed up the multiple roles and possibly stressful in combination roles of URAs: “... research administration is a dynamic, challenging, and stressful profession. Research admin-
Administrators play many different roles: compliance officer, cheerleader, consoler, advocate, and—perhaps the least appreciated role—crisis counselor.”

Other individuals and organizations have further elaborated upon the role of the URA to examine their organizational context and the focus of their work. Hensley (1986) assessed URAs as a subset of higher education administrators and was quoted as defining research administrators as those who “render assistance directly or indirectly to principal and co-investigators,” and included in this group what he called a “heterogeneous work group” including university staff from both the pre-award and post-award grant or contract life cycle and all those support personnel in between other than the investigators themselves (Beasley, 1992; Merritt, 1995; Mishler, 1989). After surveying 400 URAs, Eveslage and Shisler (1984) found that they tended to characterize themselves as falling primarily into one of two groups: pre-award, focusing primarily on the activities that are part of proposal preparation prior to the receipt of a grant and/or post-award, focusing primarily on grant and contract management after an award has been received. More recently, Beasley (1992) (also one of the authors of the original micrograph on the role of research administration) evaluated the voluntary professional associations that URAs tend to affiliate with and highlighted the importance of the multiple roles of the URA within higher education. Beasley’s assessment added to the pre-award-only and post-award-only group to include the more current trend of a third category of URAs—those who are associated with a combined pre- and post-award organizational unit (Atkinson, 2005; Beasley, 1992; Eveslage & Shisler, 1984; Shisler et al., 1987). As URAs are studied, one must consider their roles and the context (both institutional and federal environment) within which they perform their roles (Hansen & Moreland, 2004). The “structural response” to the changing environment in research administration has resulted in various organizational configurations of the pre-award, post-award, or combined research administration office as well as variation in the main unit to which each type of research administration office may substantially report such as academic affairs or a non-academic affairs office (e.g., Finance) (Hansen & Moreland, 2004).

This study explored the following questions:

1. What types of occupational stressors are prevalent in the self-reports of university research administrators?

2. Is the degree or type of role stress influenced by:
   a. affiliation of their office unit within their institution, or
   b. type of research administrator?

The Occupational Stress Inventory Revised (OSI-R) utilizes McLean’s six types of occupational stress because of its link to occupational role as well as high validity and reliability, and the wide range of employees with which it has been validated. McLean’s types of occupational stress are defined as:

1. Role Overload—The extent to which job demands exceed resources (personal and workplace) and the extent to which the individual is able to accomplish workloads.
2. Role Insufficiency—The extent to which the individual’s training, education, skills, and experience are appropriate to job requirements.

3. Role Ambiguity—The extent to which priorities, expectations, and evaluation criteria are not clear to the individual.

4. Role Boundary—The extent to which the individual is experiencing conflicting role demands and loyalties in the work setting.

5. Responsibility—The extent to which the individual has, or feels, a great deal of responsibility for the performance and welfare of others on the job.

6. Physical Environment—The extent to which the individual is exposed to high levels of environmental toxins or extreme physical conditions (Osipow, 1998).

The study was exploratory and analytical in nature. The emphasis was predominantly on quantitative methodology and a randomly selected population. The limitations of the proposed study were related primarily to population and methodology. One factor that limited the study was the ability to generalize to the total population. The intended sample of URAs was a convenience group and members of NCURA. Not all URAs belong to NCURA. Some affiliate with the Society for Research Administrators (which includes more than university-affiliated research administrators), or other practice related groups like the Council on Government Relations, the Council on Undergraduate Research, or the National Association of College and University Business Officers. Some do not affiliate with a membership association at all. Random selection of NCURA members was a convenient means of ensuring that URAs who were engaged in their field were invited to participate, but the sample was not representative of the total population of university research administrators. Rather, it was only able to be generalized to groups similar to the NCURA members.

Two limitations related to methodology. First, because the Occupational Stress Inventory Revised (OSI-R) measured the extent to which role stress might be experienced by URAs and not the source of that stress, no causal relationships could be proved or inferred from the data collected. Second, there was a risk of social desirability bias because: 1) role stress can only be recorded by self-report, 2) the experience of role stress is individualized and perceptual, and 3) it might have been interpreted by the individual as positive or negative. However, occupational role stress psychologists who have published articles on the validity and reliability of self-report assessments maintain that self-report is currently the best means of obtaining role stress data from a subject due to its very nature. Although there are varying opinions related to which assessments were best for differing types of role stress, all agree that perception of role stress is an individualized psychological process that can only be tapped into via a self-report-based mechanism (Barr, 2005; Biron, Ivers, Brun, & Cooper, 2006; Fiesel, 2006; O’Driscoll & Cooper, 1994; Osipow, 1998).

The electronic admission of the OSI-R to the study subjects involved an e-mail invitation, followed by a web-based OSI-R survey. Although seemingly limited to only those individuals comfortable with e-mail and web-based surveys, URAs engage in extensive use of electronic research administration methods by the fed-
eral government which allowed the researcher to determine that they would be well versed in the use of e-mail, listservs, electronic databases, as well as web-based interfaces in order to perform their duties. Additionally, NCURA and SRA, with which many if not all targeted respondents affiliate, use electronic means extensively to interact with their memberships. Care was taken to ensure that the web-based survey service used was generally user-friendly and no more complicated than those services already in use by URAs.

Lastly, one aspect of self-report methodology for measurement of occupational stressors that was unavoidable is that individuals do not necessarily attribute the stress they feel to their occupations. One criticism of the basis for most inventories of occupational stress in terms of person-environment fit theory is that individuals’ self-perceptions are not always accurate. For example, in a study looking at the occupational role stressor of environment, employees self-reported stressors associated with a “sick” building, which after investigation was determined not to be “sick” at all but the self-reports of the employees identified the wrong source regardless (Lees-Haley, 1993). Also, according to Barling et al., some individuals are simply more prone to stress and therefore, alternately, are more likely to report feeling stressors in general (Barling, Kelloway, & Frone, 2006).

**Research Methodology and Design**

**Sampling**

NCURA has over 6,000 members employed at institutions of higher education and teaching hospitals. The inclusion criteria consisted of self-identification as a URA and NCURA member combined with confirmation that they concurrently identified themselves as working for an office of sponsored programs or other similarly purposed university or teaching hospital unit. The survey administration method was via a direct e-mail to participate in an on-line web survey service that enabled the survey to be completed anonymously.

In his analysis of occupational stress data, Barr (2005) found that the presence of occupational stress was a factor in non-response to organizationally-based surveys and that occupational role stressors like role overload, high role ambiguity, and low locus of control were correlated with non-response. In an attempt to control for this effect, potential respondents were provided with a URL that could be accessed from any setting so that they had the option of completing the survey in a non-occupational setting by forwarding the invitation to their home e-mail addresses.

**Measures**

The assessment administered was the Occupational Roles Questionnaire (ORQ) portion of the Occupational Stress Inventory-Revised (OSI-R). The current version of the OSI-R is appropriate for ages 18 years and older and provides normative data for both gender and specific occupational categories (i.e., executive, professional, technical, administrative support, etc.) which is comparable to the sample population. The ORQ consists of six scales, with ten items per scale, including: role overload (RO), role insufficiency (RI), role ambiguity (RA), role boundary (RB),
responsibility (R), and physical environment (PE). According to Osipow (1998) these six scales are based upon McLean’s (1975) set of six occupational stressors. Because URAs are unlikely employed in extreme physical environments in their university setting or teaching hospital, the sixth scale was not utilized. The generic profile form was used and compared with the T scores of the total normative sample since the internal consistency analysis was conducted with the normative sample. Utilizing a Likert scale, items provided respondents with the ability to rank statements as follows from: 1) rarely or never true, 2) occasionally true, 3) often true, 4) usually true, to 5) true most of the time (Osipow, 1998).

**Procedures**

Utilizing direct e-mail, the researcher extended an invitation to the URAs who comprised the random sample to participate in a survey on occupational role stressors related to university research administration. The researcher made reference to the previous stress survey (Shambrook, 2007) which indicated that the URAs surveyed reported experiencing stress both at home and at work and where those two intersect with each other. The sample was invited to further explore this issue to determine what (if any) stress they might experience as a URA by examining only their occupational experience. Although this was not directly addressed in their invitation, the sample was asked for additional information—type of URA in their organization (pre-award, post-award, combined pre- & post-award, or other) and the type of unit to which they were organizationally affiliated (academic, administrative, or other)—to determine if there were any differences among the commonly recognizable groups internal to the occupation. Because the scope of sponsored programs at institutions of higher education and teaching hospitals widely varies, data were collected to determine what type of university research administrator they consider themselves in order to further clarify their responses. The data matrix utilized to organize the anticipated data is offered below (Figure 160.11-1).

Additional items added to the questionnaire included:

1) Do you consider yourself a pre-award, post-award, combined pre-and post-award or other type of research administrator?
2) What is the title of the university employee that you report to?
3) What is your job title?
4) What is the title of your organizational unit or office?

**Figure 160.11-1. Data Matrix**

<table>
<thead>
<tr>
<th>Stressor</th>
<th>Academic Affairs</th>
<th>Administrative Affairs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Role Ambiguity (RA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Overload (RO)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Insufficiency (RI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsibility (R)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Role Boundary (RB)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
5) Does your organizational unit report to academic affairs, administrative affairs, or another unit within your institution?

6) How many years have you been a university research administrator?

Via three similarly named e-mail addresses the researcher invited 499 random individuals per e-mail address to participate in the survey. This was done a second time one week later to allow the researcher to get a sense of the percentage of bounce-back to expect. The target number of invitees was 3,000 in total. Because some e-mails bounced back or were likely to have been filtered by institutional firewalls, 3,000 invitee e-mails is not equal to 3,000 who actually received e-mail invitations. Therefore, an accurate response rate cannot be calculated; rather, an approximate response rate of (assuming 15% attrition due to lost e-mails) 17.88% was yielded. The survey was available via the on-line web survey service from March 17, 2008 through May 31, 2008. At the end of the four weeks the survey was closed so that the results could be analyzed.

Once the data were collected and downloaded from the web service, utilizing SPSS the researcher used descriptive statistics to analyze the data. The data were scored and grouped according to the data matrix; measures of central tendency were derived. Correlations were used to assess the relationships between and among the stressors and to inform the researcher’s view of patterns as the reports of the types of URAs and the role stressors they experienced in relationship to their characteristics emerged (Schloss & Smith, 1999). The overall group was finally compared to the normative sample provided by the OSI-R instrument.

As a researcher who is also a university research administrator, the first study, which assessed potential occupational role stressors of URAs, had to be quantitative so the data could not be directly influenced by researcher bias. However, having a URA as the researcher conducting the study is consistent with other research administration literature and its self-reflective tradition. Collecting additional information about the groups of research administrators and their unit’s university affiliation provided data that had the potential to make the incidence of stressors meaningful to not only the total group but also to the specialized groups within the occupation.

The survey instrument was entered into the on-line survey website SurveyMonkey.com, as was the required PAR licensing agreement language “Items 7-77 are adapted and reproduced by special permission of the Publisher, Psychological Assessment Resources, Inc., 16204 North Florida Avenue, Lutz, Florida 33549, from the Occupational Stress Inventory -Revised by Samuel H. Osipow, Ph.D., Copyright, 1981, 1983, 1987, 1998 by Psychological Assessment Resources, Inc.” Further reproduction was prohibited without permission from PAR, Inc., which specified that no copies could be made of the instrument. Based upon the licensing agreement, a copy of the instrument is not provided with this article. The six additional questions preceded the scales provided by the ORQ.

The results were analyzed using a combination of Microsoft Excel spreadsheet software and SPSS statistical software. The six additional questions pertaining specifically to the type of URA and institutional configuration within which they
worked were considered nominal variables. The items from the individual scales of the OSI-R ORQ were considered ordinal variables. Each scale within the ORQ was scored individually and the scales were not totaled because each measured a different occupational stressor; therefore, an aggregate or sum total score would not provide any useful information. Only the respondents who completed all ten questions of a scale were included in that scale’s data set.

Results of Analysis

Sample Characteristics

Although 482 respondents began the survey, 456 surveys were fully completed by the day the survey was closed and were utilized for the scale data analysis. All respondents who completed the first six questions were utilized to form a picture of the population of URAs because even if they did not complete the survey they did reflect a subset of the main population that had been randomly selected. Figure 160.11-2 details the frequency of the responses to the six additional questions and the categories with which the respondents self-identified.

The types reported and the number of years of experience was consistent with the literature. However, in response to the question, “Does your organizational unit report to academic affairs, administrative affairs, or another unit within your institution?” the majority picked “other”, which was not expected. The literature suggests that most URAs are affiliated with either academic affairs or administrative affairs (Davis, 1991; Eveslage & Shisler, 1984; Shisler et al., 1987). The researcher considered

**Figure 160.11-2. Characteristics of Study Respondents**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of URA (N=482)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Award</td>
<td>85</td>
<td>17.6</td>
</tr>
<tr>
<td>Post-Award</td>
<td>80</td>
<td>16.6</td>
</tr>
<tr>
<td>Combined Pre- &amp; Post-Award</td>
<td>258</td>
<td>53.5</td>
</tr>
<tr>
<td>Other</td>
<td>59</td>
<td>12.2</td>
</tr>
<tr>
<td>Office Affiliation (N=456)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Affairs</td>
<td>126</td>
<td>27.6</td>
</tr>
<tr>
<td>Administrative Affairs</td>
<td>118</td>
<td>26.1</td>
</tr>
<tr>
<td>Other*</td>
<td>211</td>
<td>46.3</td>
</tr>
<tr>
<td>Number of Years Experience (N=482)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5</td>
<td>165</td>
<td>34.2</td>
</tr>
<tr>
<td>5-10</td>
<td>123</td>
<td>25.5</td>
</tr>
<tr>
<td>10-15</td>
<td>70</td>
<td>14.5</td>
</tr>
<tr>
<td>15-20</td>
<td>67</td>
<td>13.9</td>
</tr>
<tr>
<td>20+</td>
<td>57</td>
<td>11.8</td>
</tr>
</tbody>
</table>

Key: **bold** indicates most frequently occurring result

*Of the other category for office affiliation: 169 were academic affairs, 29 were administrative affairs, and 14 were unclassified.
the possible explanations for this to be: 1) the respondent wanted to utilize the text response option of “other” to provide greater detail, 2) the academic or administrative classification did not apply, or 3) the respondent did not feel that their affiliation was a clear fit for either academic affairs or administrative affairs. The data revealed that 43.7% of the “other” URA respondents were executive-level academic leadership employees who did not identify as either administrative affairs or academic affairs but a separate category within their institution. The second largest category was the combined category where 18.6% of the sample considered themselves a combination of the two areas. After further examining the text-based answers, the researcher reclassified the respondents with the following types of text-based answers to either academic affairs or administrative affairs as follows.

**Administrative Affairs**
- Advancement—The office unit to which the URA reports was affiliated with a university foundation, development office, or institutional advancement.
- Finance and Business—The office unit to which the URA reports was affiliated with a higher education business, accounting, or financial office.
- Medical School Administration—The office unit to which the URA reports was affiliated with a medical school’s finance, accounting or business administration office.

**Academic Affairs**
- Academic Leadership—The office unit to which the URA reports was affiliated with an academically oriented administrative office, dean’s office, college administration, or academic department administration.
- Chief Academic Officers—The office unit to which the URA reports was affiliated with a president’s office, provost’s office, chancellor’s office, or a vice presidential-level academic or research office.
- Research—The office unit to which the URA reports was affiliated with a sponsored programs office, research unit, or a research center.

All other respondents who did not fit into the above description remained unclassified as working for an office affiliated with either academic or administrative affairs. Figure 160.11-3 represents the breakout of participants in the study after reclassification. The resulting break-out is consistent with the literature on university research administration.

Respondents were also asked their job title and their supervisor’s job title. These data were text-based and for the purpose of this study collected to allow for future, more detailed study into the organizational trends in university research administration titles and functions as well as to provide potential reference points against which to compare other responses.

**Occupational Roles Questionnaire (ORQ)**

The six scales to the ORQ correspond to the six types of occupational role stress-
ors. The first five scales are pertinent to this study of university research administrators. Although administered as part of the ORQ, the last scale of the ORQ, Physical Environment (PE), is not directly germane to this study because university settings are typically not extreme environments. By definition, research administrators who are at a university are likely in a typical university office setting with a controlled environment. The majority of respondents also skipped the items in this scale. For all scales, the T scores of the population of respondents were compared to the normative sample T scores for the sake of comparison and to interpret the respondent’s scores. The normative sample’s scores had a mean of 50 and a standard deviation of 10 and the normative sample was based upon a diverse pool of applicants in various occupations, ages, and educational levels (Osipow, 1998). The interpretive guidelines were based upon the linear scale scores of the normative sample as shown in Figure 160.11-4. The means of the T scores for the whole population of 456 URAs when compared to the normative sample revealed two means that fell into a range which suggested mild levels of maladaptive stress and strain. Role ambiguity

(RA) had a mean of 70 and role overload (RO) had a mean of 65. The results for role insufficiency (RI), role boundary (RB), and responsibility (R) were unremarkable and fell within one standard deviation of the normative sample’s median and therefore fell within the normal range as shown below in Figure 160.11-5.

According to the interpretive guidelines in Figure 160.11-4, the group mean score of 70 indicated “a strong probability of maladaptive stress, debilitating strain, or both.” The researcher compared the T-score (hereafter referred to as score) means of various groupings from the study sample to determine what degree of variation might be present in the population and if there were factors which increased the score to over 70. The results indicated that the types of occupational stressors in the URA sample which were prevalent were RA and RO and at higher levels than the

**Figure 160.11-3. Types of Other Respondents**

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Affiliation (N=456)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic Affairs</td>
<td>295</td>
<td>65</td>
</tr>
<tr>
<td>Administrative Affairs</td>
<td>147</td>
<td>32</td>
</tr>
<tr>
<td>Other*</td>
<td>14</td>
<td>3</td>
</tr>
</tbody>
</table>

*Key= bold indicates most frequently occurring result*

**Figure 160.11-4. ORQ Interpretive Guidelines**

<table>
<thead>
<tr>
<th>T Scores for Normative Sample</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>70T+</td>
<td>Indicate a strong probability of maladaptive stress, debilitating strain, or both</td>
</tr>
<tr>
<td>60–69T</td>
<td>Suggests mild levels of maladaptive stress and strain</td>
</tr>
<tr>
<td>40–59T</td>
<td>Are within one standard deviation of the mean and should be interpreted as being within the normal range</td>
</tr>
<tr>
<td>40T</td>
<td>Indicate a relative absence of occupational stress or strain</td>
</tr>
</tbody>
</table>

(Source: Osipow, 1998)
normative sample. The stressors of RI, RB, and R were within the normal range but still at higher levels than the average employee in the normative sample. Having data that addressed research question number 1, the researcher looked to the types of URAs in the sample population and their organizational affiliation to determine if any variance by group or if there were any relationships between different groups and URA characteristics which influenced the level of RA or RO was present. The researcher further examined that portion of the sample that reported 70+ levels of occupational stress.

**Type of Research Administrator**

As shown in Figure 160.11-6, respondents who identified themselves as “post-award” research administrators or “other” research administrators had the highest scores for RA with means of 71 and 71, respectively. The second highest set of means for the sample were for RO with means ranging from 62 for post-award URAs to 66 for those who identified themselves as other URAs. URAs in all types reported mild levels of RO. Pre-award and combination URAs reported mild levels of RA. RE was a mild stressor for URAs who labeled themselves as other.

**University Affiliation of URA Office Unit**

As shown in Figure 160.11-7, all respondents, with all manner of office affiliations within their institutions, reported a maladaptive level of stress, with each category having a mean score of 70. The second highest set of mean scores fell within the mild level of maladaptive stress range for RO.

**Years of Experience as a URA**

As shown in Figure 160.11-8, respondents who identified themselves as being in the 5–10, 15–20, or the 20+ years of experience group had the highest scores which suggested a high level of maladaptive RA stress. All other years of experience indicated
### Figure 160.11-6. ORQ Scales Means of Scores by Type of URA

<table>
<thead>
<tr>
<th>Type of URA</th>
<th>(RO) Overload</th>
<th>(RI) Insufficiency</th>
<th>(RA) Ambiguity</th>
<th>(RB) Boundary</th>
<th>(R) Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Award N=84</td>
<td>64</td>
<td>56</td>
<td>69</td>
<td>58</td>
<td>55</td>
</tr>
<tr>
<td>Post-Award N=70</td>
<td>62</td>
<td>56</td>
<td>71</td>
<td>57</td>
<td>56</td>
</tr>
<tr>
<td>Combination N=520</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>59</td>
<td>59</td>
</tr>
<tr>
<td>Other N=52</td>
<td>66</td>
<td>58</td>
<td>71</td>
<td>59</td>
<td>61</td>
</tr>
<tr>
<td>Total N=456</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td>58</td>
</tr>
</tbody>
</table>

### Figure 160.11-7. ORQ Scales Means of Scores by Affiliation

<table>
<thead>
<tr>
<th>URA Office Unit Reports to:</th>
<th>(RO) Overload</th>
<th>(RI) Insufficiency</th>
<th>(RA) Ambiguity</th>
<th>(RB) Boundary</th>
<th>(R) Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic N=123</td>
<td>64</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td>57</td>
</tr>
<tr>
<td>Administrative N=113</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td>Other N=197</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>59</td>
<td>58</td>
</tr>
<tr>
<td>Total N=433</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td>58</td>
</tr>
</tbody>
</table>

### Figure 160.11-8. ORQ Scales Means of Scores by Years of Experience

<table>
<thead>
<tr>
<th>Years of Experience</th>
<th>(RO) Overload</th>
<th>(RI) Insufficiency</th>
<th>(RA) Ambiguity</th>
<th>(RB) Boundary</th>
<th>(R) Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 N=153</td>
<td>62</td>
<td>56</td>
<td>69</td>
<td>58</td>
<td>54</td>
</tr>
<tr>
<td>4-10 N=116</td>
<td>65</td>
<td>58</td>
<td>71</td>
<td>59</td>
<td>58</td>
</tr>
<tr>
<td>10-15 N=68</td>
<td>67</td>
<td>57</td>
<td>60</td>
<td>60</td>
<td>62</td>
</tr>
<tr>
<td>15-20 N=66</td>
<td>67</td>
<td>59</td>
<td>72</td>
<td>58</td>
<td>60</td>
</tr>
<tr>
<td>20+ N=53</td>
<td>68</td>
<td>58</td>
<td>70</td>
<td>58</td>
<td>62</td>
</tr>
<tr>
<td>Total N=456</td>
<td>65</td>
<td>57</td>
<td>70</td>
<td>58</td>
<td>50</td>
</tr>
</tbody>
</table>

### Figure 160.11-9. Correlations among ORQ Scales of Occupational Stressors for URAs

<table>
<thead>
<tr>
<th>Stressor</th>
<th>N=456</th>
<th>RO</th>
<th>RI</th>
<th>RA</th>
<th>RB</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO</td>
<td></td>
<td>1.00</td>
<td>0.250</td>
<td>-0.036</td>
<td>0.350</td>
<td>0.578</td>
</tr>
<tr>
<td>RI</td>
<td></td>
<td>0.250</td>
<td>1.00</td>
<td>0.462</td>
<td>0.226</td>
<td>0.285</td>
</tr>
<tr>
<td>RA</td>
<td></td>
<td>-0.036</td>
<td>0.462</td>
<td>1.00</td>
<td>0.071</td>
<td>0.062</td>
</tr>
<tr>
<td>RB</td>
<td></td>
<td>0.350</td>
<td>0.226</td>
<td>0.071</td>
<td>1.00</td>
<td>0.398</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>0.578</td>
<td>0.285</td>
<td>0.062</td>
<td>0.398</td>
<td>1.00</td>
</tr>
</tbody>
</table>

Data in **bold** indicate a correlation significant at the 0.01 level (2-tailed).
mild levels of RA as well. Mild levels of RO were also indicated in all categories of years of experience with 20+ being the highest score at 68. The data shift from mildly maladaptive in years 1–5 to within the high, maladaptive range in the year 10–15 group back down again for the 15–20 group, and finally up again for 20+.

**Correlations among the Five ORQ Stressors for URAs**

Among the five types of occupational stress included in the analysis were the correlations that could be expected as stress correlates with stress in general. There were positive correlations among them, with Role Ambiguity (RA) having the strongest correlation [.445 significant at the 0.01 level (2-tailed)] with Role Overload (RO), meaning that the higher the incidence of one, the higher the incidence of the other will be. RA was also positively (.131) correlated with RB and positively (.185) correlated with R. Both were also significant at the 0.01 level (2-tailed).

The data provided answers to the research questions. As shown in Figure 160.11-5, the types of occupational stressors most prevalent in the self-reports of URAs were RA and RO. RA was in the range that would indicate the high levels of maladaptive stress that might lead to psychological strain. RO was in the range that might indicate mild levels of maladaptive stress. All other stressors (RI, RB, and R) fell within the average to normal range. As shown in Figure 160.11-3, Figure 160.11-4, and Figure 160.11-6, the degree or type of role stress reported was not notably influenced by affiliation of their office unit within their institution, their type of URA, or even their years of experience as a research administrator as those scores were consistent across groups.

Overall, the URA sample of 456 respondents reported higher scores on all scales of the ORQ than the normative sample provided by the instrument. As shown in Figure 160.11-5, the mean scores for all scales of the ORQ for the URA sample ranged from between 5 to 20 points higher than the normative sample. Approximately 68% of the normative sample reported occupational stress levels within the 40–59 “average to normal range” occupational stress for all stressors or were within one standard deviation of their mean of 50. Comparatively, the URA sample had mean scores for all scales of the ORQ which ranged from 55 to 70, indicating that 68% of the URA sample reported from mild to maladaptive levels of occupational stress or psychological strain as compared to 2% of normative sample. Based upon the results of the study, URAs experience higher than normal occupational stress and that stress is not linked to the individual characteristics of the type of URA, the affiliation of the office they work for, or their years of experience in the field.

**Summary of Findings**

There were three main findings related to the incidence and types of occupational stressors among URAs set within the context of their organizational structure, their type, and years of experience.

1. The respondents revealed that the types of occupational stressors that were most prevalent were RA and RO and those were reported at higher levels than the normative sample. RA was at a level which indicated a high probability of
maladaptive stress and/or debilitating strain and RO was at the level which indicated mild levels of stress and strain.

2. The respondents revealed that the occupational stressors of RI, RB, and R were in evidence within the average range for stress but at a higher level than the normative sample even though they were the three least prevalent of the URA sample.

3. The results showed that the types of URAs in the sample population, their organizational affiliation, and years of experience did not influence the type or incidence of the occupational stressors reported. In fact, the URA sample had consistent responses regardless of affiliation, type, or years of experience.

**Discussion of Findings**

Hansen and Moreland (2004) provided a means of understanding the focus of URAs and their concept of the Janus-faced URA begs the question of whether or not having a Janus-faced role is occupationally stressful. The Janus-face concept embodies the nature of the changes in the field of research administration as a result of multiple responsibilities and increasing levels of compliance that make it challenging to be a facilitator of the research process at the same time. Citing Hansen and Moreland’s “structural responses” to these challenges the researcher included survey questions related to office unit affiliation in order to gain a perspective on the types of structures to which the different types of URAs report (Hansen & Moreland, 2004). The findings conclusively indicated two high levels of occupational stressors RA and RO, and three lower levels of the occupational stressors RI, RB, and R.

Because the scores are for a group of anonymous URAs, for the purpose of generalizing to the larger NCURA population of URAs as opposed to individuals the researcher could follow up with directly, the literature was the source of interpretation of the results. The literature was reviewed in relation to the characteristics of the occupational stressors found to be prevalent in the URA population and formed the basis for the conclusions drawn.

**Finding 1**

**Role Ambiguity**

According to Osipow (1998), respondents who have high scores on RA may report an unclear sense of: a) “what they are expected to do,” b) “how they should be spending their time,” c) “how they will be evaluated,” and d) “where to begin on new projects.” Additionally, they may: e) “experience conflicting demands from supervisors” and f) “have no clear sense of what they should do to get ahead.” The extremely high scores for URAs indicated the seriousness of the level of RA within the URA sample and signified the need for attention to the problem.

Atkinson’s (2005) primer on scientific self-regulation for institutions of higher education and teaching hospitals indicated that the traditional role of the URA as a partner with the faculty was being blurred by the addition of compliance requirements and greater university policy accountability. Collinson’s study of URAs in
England (whose occupation mirrors that of American URAs) found that URAs there were in roles that were simultaneously administrative and academic. They reported experiencing a lack of a consistent perception of their role by the faculty or their academic counterparts than the perception they had of themselves. She described this type of role ambiguity as being ameliorated by a coping mechanism she called “occupational identity work” (Collinson, 2007). Job stress authors cite the need for interventions to improve coping mechanisms to reduce occupational stress as a necessary step (Bowden, 2000; O’Driscoll & Cooper, 1994). The phenomena of varied perceptions of the research administrator can be seen in the reflective literature from 1998 to the present in articles written to define or characterize the specific role of the current field and of the profession of research administration. These articles are offered as education for URAs as well as the institutions they are employed by (Atkinson, 2002, 2005; Collinson, 2004, 2007; Erickson et al., 2007; Gabriele, 1998; Hansen & Moreland, 2004; Lowry & Hansen, 2001). This is consistent with a high degree of uncertainty about what their institutions expect of them, how they will be evaluated as a result of their work, and by what means they should be promoted. If there was a common understanding of the profession, then the articles would be unnecessary and not resonate with their audience or peer reviewers. The cited researchers went on to point out the extreme difficulty of meeting all demands in the current climate of federal accountability while facilitating research—this is consistent with a characteristic of multiple demands upon an occupational role leading to RA (Fried, Ben-David, Tiegns, Avital, & Yeverechyahu, 1998).

**Role Overload**

According to Osipow (1998), respondents who have high scores for RO on the ORQ may “describe their work load is increasing, unreasonable, and unsupported by needed resources.” Also, “they may describe themselves as not feeling well trained or competent for the job at hand,” or “needing more help” and/or “working under tight deadlines.” Descriptions of the profession of URAs include recognition of increasing workload to the regulatory environment and tight deadlines are an intrinsic part of the nature of the job (Kirby, 1992; McKenzie, 1988; Miner et al., 2003; Stockton & Krebs, 1976). There was no evidence in the literature that URAs describe their workload as unreasonable or lacking in funding to provide their services but constant training is emphasized as a result of the increase in electronic research administration, regulatory compliance, and increased fiscal liability of federal grants (“About us,” 2007; Erickson et al., 2007; NCURA, 2007). Reports of mild levels of maladaptive stress or psychological strain from URAs may signify a shift towards URAs’ feeling that they cannot keep up with the pace of professional development needed to succeed in the profession. If so, this is a key indicator for burnout which leads to a reduction in employees’ institutional commitment according to some of the occupational stress literature (Northwestern National Life Insurance Company, 1992; Siefert et al., 1991).
Finding 2

Occupational Stressors Higher than Normative Sample

Although the respondents to the URA survey reported the occupational stressors of RI (55), RB (58), and R (59) within the normal to average range (40–59), their scores were still higher than the normative sample mean of 50. Because RA, the highest reported stressor, is positively correlated with RB (0.131) and R (0.185), significant at the 0.01 level for our population, the researcher concludes that these results are consistent with a higher score for RB and R than the normative sample. The higher URA sample mean of RI (55) as compared to the normative sample (50) cannot be linked to the higher RA or RO scores which may be related to the fact that it is the lowest occurring stressor of the group.

Finding 3

Consistency of Report Regardless of Affiliation, Type, or Years

URAs are employed at a wide variety of institutions ranging from primarily undergraduate institutions (PUIs) to large-scale research universities and even teaching hospitals but the results indicate that they share a common experience of their profession no matter at which point they enter the grants process. This evidence is found in the consistency of scores and the absence of major shifts in the data as a result of characteristic factors. Despite Hansen and Moreland’s (2004) “structural response” to the increasing role of URAs, the affiliation of URAs’ office units did not change the consistency of their responses to the ORQ. Furthermore, individual characteristics such as type of university research administrator or years of experience influence those results as shown in Figures 160.11-6 - 160.11-8. Due to consistency in the level of occupational stress, these results signify that there would also be common coping mechanisms that would manage the potential negative effects of the various occupational stressors.

Conclusions and Recommendations

Two major conclusions emerge from the findings of this study.

1. URAs as a whole are under high levels of occupational stress, indicating a need for intervention. According to Osipow’s (1998) stress, strain and coping model as well as Fogarty et al.’s model which incorporates organizational variables (those an institution of higher education or teaching hospital may influence), intervention is necessary and the degree of strain should be the determinant of the degree of intervention.

2. Occupational stress has negative impacts on employers as well as employees (Reidar et al., 2005; Walter & Gordon, 1998); this study has shown that URAs share a common experience of their profession’s stressors as evidenced by the consistency of their results. Also, the nature of RA is such that there is evidence of potential misperceptions between employer and employees or employees and coworkers; therefore, both URAs themselves as the common denominators as well as their institutions need to be involved in the selection of interventions.
Overall, the high levels of RO and RA and the generally higher than normative group levels for other stressors indicate the importance of occupational stress as an important factor in university research administration. Research is integral to the nature of university and teaching hospital life; this study has shown that the employees who facilitate that process are experiencing maladaptive levels of stressors and/or psychological strain. Therefore, the negative impacts of occupational stress are already impacting those universities and teaching hospitals.

This study was conducted to both fill a gap in the literature on occupational stress for URAs as well as to provide insight into the nature of what is essentially a problem universal to all employees as it relates to this specific profession. Knowing the incidence and types of stressors that a particular group of employees experience allows for interventions to be considered to increase coping and to reduce psychological strain (Fogarty et al., 1999). The two recommendations that emerge as a result of this study include self-evaluation and peer review.

1. URAs know the challenges that they face as a profession with emerging demands and shifting perceptions of what they need to meet those demands. They need to recognize the common experience they share and engage in self-evaluation as well as profession-wide evaluation of those occupational stressors which are most prevalent: role ambiguity and role overload. Armed with this information, they will be better able to meet the demands of their occupations while accruing coping skills matched to the stressors they most experience.

2. Institutions of higher education and teaching hospitals are academically oriented and based upon traditional academic values. The research administrators within their employ operate in an environment that is a hybrid of both the academic and business or regulatory arenas. The URAs in their offices of sponsored research are essentially unique employees and the interventions that might work for traditional higher education administrators may or may not work to alleviate occupational stress as found in this study among URAs. Institutions should provide resources to allow for URAs to engage in peer review processes to alleviate continuing role ambiguity. This could occur informally, for example, within a consortium of their colleagues at other similar institutions, or formally availing themselves of peer review provided by recognized professional organizations within the profession. Being more open to learning from URAs about the occupation itself and the expectations an institution may have of its URA employees should be an ongoing dialogue in concert with changes in the needs of the institution itself and the regulatory environment within which its research process takes place.

In conclusion, by sharing responsibility for limiting occupational role stressors and their impacts, higher education and its research administration employees will be able to take steps to improve outcomes for both employer and employee.

**Literature Cited**


Occupational and Organizational Psychology, 71(1), 19–27.


**About the Author**

**Christine Katsapis** has a Ph.D. in Education from American University and currently serves as the Assistant Dean for Research at Gallaudet University. Gallaudet University is the world leader in liberal education for deaf and hard of hearing students. It has an international reputation for its outstanding programs and the research it conducts on the history, language, culture, and other topics related to deaf people. Dr. Katsapis has been at Gallaudet for 15 years, primarily with the Office of Sponsored Programs communicating primarily in American Sign Language (ASL). A member of NCURA since 1996, Dr. Katsapis was in the Leadership Development Institute Class of 2005 and has served on regional- and national-level committees. She just concluded serving on the national Professional Development Committee and recently joined Research Management Review’s editorial board. Dr. Katsapis’ research areas include university research administration, federal evaluation of educational institutions, and occupational role. She is a 2009 recipient of the American Association of University Administrators’ Donald A. Gatzke Dissertation Award.
¶190 Knowledge Check

AIS editors

The Q&As at ¶190.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 100 has been understood. Note: For the answer key for ¶190.1, see ¶190.3, which appears on a separate page (page 190:5) for testing purposes.

Discussion topics at ¶190.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶190.1 Q&As

1. It is often said that the office of sponsored programs sits between the researcher and the sponsor but/and owes allegiance to
   (a) The researcher only
   (b) The sponsor only
   (c) Both
   (d) Neither

2. According to ¶105, there was in particular a “rapid influx of funding from the federal government for research at colleges and universities”
   (a) As part of FDR’s New Deal
   (b) After the Soviet launch of Sputnik
   (c) As a result of countless WWII veterans attending higher education institutions under the GI Bill
   (d) As a result of the “cultural” revolution of the 1960s

3. What is meant by the term “unfunded mandate”?
   (a) The imposition of a requirement, often grounded in legislation, on an institution that is not able to recover the costs associated with complying with the requirement through its F&A rate.
   (b) The imposition of a requirement on an institution, such as for a single audit, that does not relate directly to receipt of federal funding.
   (c) The imposition of a requirement specifically prescribing reporting responsibilities under a federal grant.
   (d) The imposition of a requirement specifically prescribing subrecipient responsibilities.
4. According to ¶105, one characteristic that is perhaps unique about sponsored programs personnel is
(a) Their understanding of the complex world of sponsored research accounting
(b) Their level of education and receipt of advanced degrees
(c) The way that they cooperate with their peers at other institutions, even though the faculty at the institutions may be competing for the same award
(d) The way in which they structure models for their career advancement

5. So far during the first decade of the 21st century, research administration has been characterized by emphasis in which of the following two areas:
(a) Red tape and research compliance
(b) Specialization and increased funding
(c) Compliance and electronic research administration
(d) Peer review and Single Audit Sampling Project

6. Under the federal budget process, funding biomedical research is typically considered:
(a) Discretionary spending
(b) Entitlement spending
(c) A pork-belly project
(d) Only once every five years

7. What is meant by the “life cycle” of an award?
(a) All processes associated with applying for and establishing, upon acceptance, a grant award.
(b) All procedures involved in processing a grant throughout the course of one fiscal year.
(c) The compliance steps associated with filing reports, financial closeout, and audit for a federal award.
(d) All processes associated with a grant award, including those relating to pre-award, post-award, and closeout.

8. As federal regulations regarding sponsored research increased, so too did all of the following EXCEPT:
(a) Complexity of the regulations
(b) The number and types of federal audits required
(c) Importance of internal controls
(d) The level or scrutiny accorded compliance
Discussion Topics

1. It is important to distinguish, as Raymond Woodrow said in his book, between management of research and management for research. How does this difference manifest itself at your institution in terms of your role in your institution’s research enterprise?

2. What are your most pressing challenges as a research administrator today? Where do you go for assistance in managing these challenges?

3. The role of sponsored research offices have changed over the past 50 years. Do you think your role as part of the OSP will change in the future? If so, how are you or can you prepare to change with it?

4. The trend in federal funding of R&D at some agencies, particularly NIH, has slowed in the last couple of years. How has this affected your operations and how will you react if this trend should continue?

5. How does your institution define who can be a principal investigator (PI)?

6. How does your department effectively balance your commitment to “service” and “compliance”? Do you periodically assess and/or modify practices to create a better balance between these two important goals?

7. It is important to remember that the grant recipient is the institution, not the principal investigator. Why is this distinction important?

8. It is often said that the role of research administration is that of “stewardship” of federal funds. What does this mean and how does it play out at your institution?

9. Someone once wrote¹, “[R]esearch administrators are responsible for a wide range of activities: workshops, sponsor relations, financial management, strategic planning, executive administration of institutional operations, facilities management, ethics, intellectual property, technology transfer, continuing professional education for researchers and staff, research law, regulatory affairs and compliance, human resources, knowledge science and information technology, archives, and stewardship.” Is there any additional role you play as a research administrator that is not included in this list? Discuss how you carry out these functions at your institution.

§190.3 Answer Key

Following are the correct answers to the questions included at §190.1.

1. (c) Both

2. (b) After the Soviet launch of Sputnik

3. (a) The imposition of a requirement, often grounded in legislation, on an institution that is not able to recover the costs associated with complying with the requirement through its F&A rate

4. (c) The way that they cooperate with their peers at other institutions, even though the faculty at the institutions may be competing for the same award

5. (c) Compliance and electronic research administration

6. (a) Discretionary spending

7. (d) All processes associated with a grant award, including those relating to pre-award, post-award, and closeout

8. (b) The number and types of audits required
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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter describes models for organizing sponsored programs offices. There is no single model that fits all situations, but exploring various options may help in determining the best model for a specific institution.

Elizabeth Mora, formerly of Harvard University, provides a clear picture of the various ways in which sponsored research functions might be organized. She presents a very broad view of “sponsored research administration” that includes pre-award functions, post-award functions, responsibilities at the central administrative level, and responsibilities at the school, college, and departmental levels. Ranging from the “traditional” model to the “fully integrated” model, there are probably as many different ways of organizing the sponsored research function as there are colleges and universities engaged in the activity.

Mora discusses the advantages and disadvantages of each of the organizational models. She also presents a detailed review of the various kinds of skills that are required for the different types of individuals who are necessary for an effective sponsored programs operation: pre-award, post-award, cash management, and cost accounting. Mora’s chapter also includes a thorough discussion of the various levels of a university at which research administration functions are carried out: central administration, unit level (college or division), and local level (department). As she skillfully points out, there are many different ways of apportioning the responsibilities across the various levels. What is most important, however, is that the roles and responsibilities assigned to each level are clearly understood throughout the organization.

Even if your institution is not in the process of re-examining its organizational structure for research administration, or if you are not the individual who will make the decision about which model will be followed, this chapter provides an excellent opportunity to think critically about the structure in place at your institution within the larger context that Mora describes.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶305, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶320), practical tools (at ¶330), case studies (¶340), and statistics and survey results (at ¶360). A “knowledge check” containing Q&As and discussion topics is included at ¶390.
As sponsored funding at universities really began after World War II, the office of sponsored programs (OSP) enterprise at colleges and universities is a fairly young one. It is probably fair to speculate that no one anticipated the life-changing discoveries in science and the rapid growth that would evolve from the government/university partnership in the research enterprise — at all levels. Many institutions' sponsored programs offices have undergone changes through the years to keep up with the changes in sponsored research.

Certain typical organizational models have emerged over time for the OSP and are outlined in this chapter. In examining four organizational models, the chapter looks at the interdependencies among the activities of a central OSP and its “unit” and “local” counterparts. Although this chapter is written from the perspective of a central OSP, the organizational models, roles and responsibilities of staff, and working relationships among OSP and local department personnel as discussed in this chapter likely will have relevancy to an institution regardless of whether its research enterprise is completely centralized, completely decentralized, or somewhere in between.

The chapter discusses typical organizational reporting relationships of the central OSP to university senior management and potential benefits and drawbacks of each. The chapter describes the core functions of the central office of sponsored programs within a university. It discusses in detail the roles and responsibilities of pre-award, post-award, cash management, and cost analysis/financial compliance, and highlights the various skills needed to staff these functions and how the workflow might be organized within each area. Lastly the chapter explores some ongoing risks and opportunities facing university sponsored research and the OSP enterprise.

What Is an Office of Sponsored Programs?

Typically an OSP — also known as the office for research administration, the office for grants and contracts, or some variation thereof — is in place to support the research mission of the institution. The OSP plays a key role in monitoring the many compliance and risk areas that are such a large part of the conduct of sponsored research in the world today. The OSP operation is one of stewardship, management, and oversight of the administrative aspects of the research enterprise at the institution. The OSP approves the official sponsored award documents (proposals, awards, reports, amendments, etc.) on behalf of the governing body of the institution through the process known as delegated signing or signature authority.

OSP Functional Areas

The OSP is typically divided into two core functional areas: pre-award and post-award. Closely related to, but not necessarily an organizational part of either pre-award or...
post-award, are the important tasks of cash management and cost analysis/financial compliance (also referred to as indirect cost accounting or cost accounting). Oversight of these two latter functions is often included within the OSP. If not part of the OSP, responsibility for sponsored cash management and cost analysis is often housed in the controller’s office.

The pre-award function encompasses the following types of activities:

◆ Assisting faculty in locating funding sources and submitting proposals for support of research and other faculty-driven activities
◆ Accepting awards and ensuring they are administered consistent with sponsor and institutional policies
◆ Mediating the award process with the sponsor to ensure university research policies, such as those relating to publication rights and other intellectual property rights, are adhered to, and that other financial and programmatic terms and conditions are acceptable to the institution

Pre-award compliance activities often include reviewing the proposal for compliance with institutional and external regulations; reviewing the proposal budget for reasonableness, arithmetic accuracy, and completeness; transmitting the completed proposal to the sponsor after providing institutional sign off; negotiating the award with the sponsor; and at many institutions setting up the data record and financial account in the grants management or other university system, which serves as the system of record for sponsored accounts. (For a full discussion of pre-award services, see Chapter 2500. See in particular ¶2505.2.)

It is worth noting that the activities of the pre-award office set the stage for many aspects of how the award will be managed throughout its life or “life cycle.” In establishing the initial terms of the grant (i.e., financial payment terms, equipment title, frequency of reporting to the sponsor, and publication terms), the pre-award function within the OSP is responsible for the award’s destiny, because in many respects, this destiny is determined upon negotiation and acceptance. Staff responsible for the award after its acceptance — post-award and to some extent cost analysis — have to live with and manage what was originally negotiated and accepted during pre-award.

The post-award function is responsible for the following types of activities:

◆ Monitoring expenses posted to the account for allowability, allocability, reasonableness, and adherence to university policy
◆ Reporting to the sponsor on project expenses posted against budget
◆ Invoicing the sponsor for expenses posted to the general ledger or relating to other contractual payment terms
◆ Collecting income (in the form of checks and wire transfers) and posting that income to the account
◆ Monitoring spending against budget, noting certain trends such as overspending or underspending
◆ Completing the final financial report to the sponsor
◆ Closing out the award by ensuring all requirements have been satisfied, including collection of interim and final progress reports, invention reporting, equipment reporting, and salary certifications

◆ Creating and distributing to internal users management reports containing key indicators such as sponsored dollars in accounts receivable, number of unreconciled accounts, and overexpended accounts

(For a full discussion of post-award services, see Chapter 3300.)

Both the cash management and cost accounting/cost analysis functions have a great deal of interaction with and are dependent upon the pre-award and post-award functions and, again, for this reason often are contained within the office of sponsored programs.

The sponsored cash management function is responsible for the draw down of funds on federal awards accomplished through a letter-of-credit mechanism. Due to the large volume, most federal agencies use their own letter-of-credit system, rather than a manual invoicing and check reimbursement system, for collecting income available to each award. These systems are individual federal systems available to one or two persons authorized to draw down funds into a university account based on expenses incurred on an award from a particular federal agency. The cash manager must ensure that excess funds are not drawn; only expenses incurred or funds for immediate need are allowed to be drawn down.

The person overseeing the cost accounting (cost analysis) function is responsible for developing and negotiating the institution’s facilities and administrative rate (also known as an F&A or indirect cost rate) on a periodic basis. This rate is then applied to the direct costs of sponsored research, as allowed by the Office of Management and Budget (OMB) in Circular A-21, Cost Principles for Educational Institutions. (For an in-depth discussion of facilities and administrative rates, see Chapter 1700.)

Audits and Training. Cost accounting staff also oversees the required federal audit known as the OMB Circular A-133 audit, specific agency reviews and audits, salary certification process, and forms collection. Cost accounting staff also can be responsible for training internal constituents at all levels on financial compliance. Training includes educating the pre-award and post-award groups as well as department and college staff on financial compliance topics. Such topics include salary certification, F&A rate dynamics and calculation, cost sharing, equipment management, and audits in general and specifically the A-133 audit. A cost analyst may provide the training in tandem with other related parties such as the department equipment officers or staff at the college level responsible for collecting salary certifications.

OSP and Other Institutional Offices
Described above are the typical functions of a central university OSP. To protect the institution from any inherent or perceived conflicts and to ensure objectivity and consistency, it often is someone in the central office who is the institutional official for purposes of signing executed award documents. To be effective research administrators, central OSP staff must work very closely with sponsored research colleagues at the
college and department levels within an institution.

**Unit (College or Division) Level.** There is often a cadre of people at the “unit” level who work with the central OSP to oversee the management of sponsored administration. A “unit” in this context refers to a school, college, or division. Individuals at this level assist the central OSP with various issues related to the management of sponsored research within that unit. Examples of duties unit personnel might perform include

- obtaining approvals from the various school-level committees to conduct the project,
- helping to get the attention of department-level staff on a compliance issue, and
- monitoring overexpended accounts at the school level.

These unit-level individuals frequently play a role in signing off on the proposal before it is sent to the central OSP for final review, approval, and submittal.

One example of when college or divisional approval should be sought by the sponsored programs office is when college or division resources such as cost sharing are being committed in the proposal. Cost sharing is an explicit financial commitment that the principal investigator’s (PI) college may be responsible for if his or her department does not have the resources. Another example of when provisions in the proposal typically would require college-level approval is for the PI’s level of effort committed, as it is the college that would know what the individual’s other commitments are (e.g., teaching, committee work, and service). By obtaining college-level approval in such a situation, those in the central office obtain assurance that the college dean supports the submission of the proposal. Depending on how the particular college or division is organized, assistant or associate deans responsible for research administration oversight may also play a role in hiring staff at the department level who actually will manage the operational aspects of the award.

**Local (or Department) Level.** The research project administration staff at the department or “local” level generally have overall responsibility for the day-to-day management of the award and therefore

- work with the PI in preparing certain parts of the proposal, such as the budget and other financial support pages;
- work with the PI and others to ensure that approval is obtained for the use of animals, human subjects, and biohazardous substances, and secure other explicit approvals as needed from the various institutional standing committees in place to support research (such as the Institutional Review Board, Institutional Animal Care and Use Committee, Institutional Biosafety Committee, and Embryonic Stem Cell Research Oversight Committee);
- work with the central office to determine how best to establish the award account once the award is made (Often there is some latitude in how the account can be set up.);
- post transactions to the award;
- determine how charges should be allocated between or among multidepartment or interdisciplinary sponsored projects;
◆ assist the central office with reporting;
◆ initiate cost transfers to move charges from one project to another; and
◆ work with the principal investigator on signing the salary certifications.

One example of how department staff and central OSP staff work together is the “chart-of-account” rules at Harvard University. At the university there are a set of chart-of-account business rules that govern sponsored account setup. These business rules set forth the minimal requirements that must be adhered to in setting up the particular sponsored account. If, however, the department wishes to manage the account in more detail, the chart of accounts can accommodate the request through a process involving a series of conversations between the OSP representative and the local department staff.

The interdependency between and among the central, college, and department staff responsible for award administration can sometimes lead to lack of precise clarity about roles and responsibilities. Two examples of where lack of clarity around roles and responsibilities may exist are the following:

(1) **Who is responsible for signing the proposal?**

The institutional official is technically responsible, but it is not unheard of to see PIs submit proposals to sponsors without any other approval or institutional signature.

(2) **Who is responsible for developing the budget?**

The department research administrator should work in concert with the PI on budget development. If the budget is not developed and vetted appropriately, the PI may end up with too few funds to support his or her work (which means the college may need to provide financial support to the project), or with more money than can possibly be used given the available infrastructure (which means that money may need to be returned to the sponsor, which could be embarrassing for the institution if it is a material amount).

This lack of clarity can range from frustrating to devastating, given the amount of institutional risk incurred with the acceptance of sponsored awards. (See further discussion below concerning risk.) Therefore it is highly advisable that the roles and responsibilities of each person in the process at all levels be clarified to the extent practicable. (An example of how one institution defines roles and responsibilities for its sponsored research enterprise is included as Figure 1. Figure 2 outlines some interrelationships among key players involved in sponsored research, certain respective compliance responsibilities, and institutional units or outside organizations providing oversight or training assistance.)
### Figure 1: Sponsored Research Roles and Responsibilities

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<th>Principal Investigator (PI)</th>
<th>PI Administrator</th>
<th>Department Chair/ Lab Director</th>
<th>Department (Research Center) Finance Office</th>
<th>School Finance Office</th>
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<tr>
<td>Assume overall responsibility for fulfillment of sponsor's terms and conditions, funding purpose, and budget.</td>
<td>Provide correct codings for all transactions, including cost sharing.</td>
<td>Hire department financial administrators who will manage sponsored funds responsibly.</td>
<td>Upload sponsored budgets to general ledger.</td>
<td>With OSP establish post-award policies and procedures in compliance with federal regulations.</td>
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<td>Ensure that charges are reasonable and appropriate.</td>
<td>Ensure correct allocations and charges shared among multiple grants.</td>
<td>Ensure that staff receive adequate training on post-award roles and responsibilities.</td>
<td>Print, distribute, collect, file, and report on monthly salary certifications for non-faculty researchers.</td>
<td>Deliver training to local research staff on policies and procedures.</td>
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<td>Adopt appropriate allocation method(s) for shared charges in research group.</td>
<td>Check transactions posted to the general ledger to ensure allowability of direct costs by reviewing reports and Detailed Listings monthly.</td>
<td>Design and Implement cost allocation schemes for those costs benefiting multiple projects, if appropriate.</td>
<td>Ensure PI administrators have access to reports and Detailed Listings every month.</td>
<td>Serve as a resource in support of departments' roles in:</td>
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## Figure 2

The following chart, from Harvard University, illustrates the interplay among certain key players involved in sponsored research, the types of regulations governing their activities, and some internal and external bodies providing oversight or training.

<table>
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<tr>
<th>Key Players</th>
<th>Regulations/Considerations (examples)</th>
<th>Some Tools for Oversight: Training and Internal/External Committees and Organizations</th>
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<td>• Office of Sponsored Programs (OSP) Web site</td>
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<td>• Sponsored Programs Operating Committee (SPOC)</td>
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The genesis of each institution’s office of sponsored programs likely has a unique story based on the strengths and weaknesses of personalities in place at the start, where the locus of power lay within the institution, and possibly even where capacity existed at the time. The OSP very likely grew out of either the academic arm or the financial arm of the institution — or perhaps certain parts of it grew out of the academic side and other parts out of the financial structure.

Recognizing that there are unique circumstances at many institutions, this section provides an overview of four general paradigms in sponsored program administration and discusses four organizational models that generally depict how many OSPs are organized. (See Figures 3-6, pages 305:9-10.)

It should be noted that the discussion in this chapter focuses on the OSP as the core research administration operations entity within the university. This chapter discusses certain financial compliance responsibilities typically found within the OSP. Responsibility for overseeing other, nonfinancial compliance areas such as human subjects, animals, biohazardous materials, and human embryonic stem cells, generally fall to other departments within the university.

Traditionally in many offices of sponsored research the pre-award function within the office reports to the academic side of the institution and the post-award function reports to the financial/administrative side of the institution. In many institutions, these units act as separate entities. Conventional thought for this traditional paradigm was that the pre-award functions worked closely with faculty members on academic research policy issues and sponsored proposal development, but the post-award functions, on the other hand, given the core accounting competencies needed to perform these functions, could easily fit within the controller’s or finance office. (This model is particularly true in those institutions where the sponsored research enterprise is relatively small and began as an outgrowth of the controller’s function.)
Along these lines, the cash management and cost accounting responsibilities could nicely fit within the controller’s or finance office, as does the responsibility for overseeing the financial and other data needed to complete the F&A cost proposal and to draw down the cash. Figure 3 — “University A” — illustrates the traditional model for organizing a sponsored research office.

What some term the next “iteration” or transition in the sponsored programs organizational model is the hybrid approach, where separate pre-award and post-award offices are housed within a particular vice president or provost area. Under this model the directors or managers of each department, pre-award and post-award, as well as the cost analysis manager and the controller, report to the same individual at the vice president or provost level. Figure 4 — “University B” — illustrates the hybrid or transitional model for organizing a sponsored research office.

An integrated organizational model has the pre-award and post-award staff working together for a common director or manager. While there are separate teams responsible for pre-award and post-award activities, because each team reports to one director, this is considered an integrated model. In this setup, the cost analysis unit reports to the same associate vice president as does the OSP director. Figure 5 — “University C” — illustrates the integrated model for organizing a sponsored research office.

A fully integrated organizational model is one where individuals work on a “life-cycle” team under a team manager. The team looks at an award as a cycle of related processes — such as start up, cash management, and close out — rather than as a series of isolated events. In this model there are specialists within the team who have expertise in pre-award and those with expertise in post-award.

By virtue of being housed in the same unit and managed by one individual, however, it is natural and efficient for the pre-award and post-award specialists to work together to manage the award through its life cycle. As issues arise during the inception of the award that might impact management of the award throughout its lifetime, pre-

![Figure 3: University A, Traditional Model for Organizing an Office of Sponsored Programs](image-url)
Figure 4: University B, Transition or Hybrid Model for Organizing an Office of Sponsored Programs

Senior Vice President for Finance and Administration

Senior Director
Office of Sponsored Programs

Associate Vice President for Finance

Pre-Award

Controller
Post-Award
Cost Analysis

Figure 5: University C, Integrated Model for Organizing an Office of Sponsored Programs

Associate Provost for Research

Vice President for Finance and Administration

Associate VP for Research Administration

Director, OSP
Pre-Award
Post-Award
Cost Analysis

Equipment

Figure 6: University D, Fully Integrated Model for Organizing an Office of Sponsored Programs

President

Provost
CFO

Associate Vice President for Sponsored Programs

Director of Life-Cycle Teams

Team A
Pre-Award
Post-Award

Team B
Pre-Award
Post-Award

Team C
Pre-Award
Post-Award

Director of Sponsored Systems and Operations

Associate Director Cost Analysis and Compliance
award staff can easily consult with the appropriate post-award person, who is physically and organizationally nearby. Under this model, there is an associate director for cost analysis who reports to the same associate vice president as does the director of the life-cycle teams. Figure 6 — “University D” — illustrates the fully integrated model for organizing a sponsored research office.

As with most staffing models, the “success” of any one of the OSP organizational structures is dependent on the caliber and competencies of the individuals within an institution. “Success” in this context is defined as a highly functional office where deliverables are accurate and satisfied in a timely manner, where communication is fluid and open, and where the customer, defined broadly to include everyone from the principal investigator to the sponsor, feels satisfied and well served. Certainly for Universities A and B, OSP staff with “soft” skills enabling the individuals to work effectively across institutional units or departments are as important as staff possessing the necessary technical skills. (See Figures 3 and 4, pages 305:9-10.)

1305.3 **Staff Coordination**

Returning to the organization models presented above, look at the first model, University A, where the pre-award and post-award functions are completely separate. (See Figure 3, page 305:9.) Each group reports to a different line of management, who ultimately reports to the president. This is the most traditional model and one that is quite common in sponsored research administration. Certainly if these offices have strong leadership that works well together, one can expect there to be strong coordination among the various parties in the pre-award, post-award, and cost analysis phases of grants administration. This would be the best-case scenario.

The worst case would occur when the leadership of the areas does not coordinate effectively and, for example, when the offices use different terminology and have different goals for the “customer” (usually the principal investigator). This would result in the customer receiving confusing information and often ineffective or little support and coordination throughout the proposal, award, and termination stages (the “life cycle”) of his or her award.

In the second model, University B, while pre-award and post-award are separated under the leadership of different senior officers, those senior officers report to the same individual, often the senior vice president for administration and finance. (See Figure 4, page 305:10.) Because of this common direct reporting line, the senior vice president can require that awards personnel have a common interface with the client and share systems, goals, etc. This is also a fairly traditional model for many sponsored programs offices and is used widely. Although the pre-award and post-award functions are separate in this organizational setup, from the perspective of the customer, this is a workable model.

In the third model, University C, there likely is frequent coordination between pre-award and post-award, as those areas report to the same person. (See Figure 5, page 305:10.) The associate vice president (AVP), in this case, also has the cost analysis function as a direct reporting line. If things were to go awry in the pre-award and post-award interface at University C, the AVP would have one person to talk to — the
director of sponsored programs. The director is responsible for the coordination of these functions and can impose common goals, streamlined systems, joint client meetings, etc.

The fourth model, University D, presents an even more evolved model; that is, a model where team managers oversee pre-award and post-award specialists on the same team, in support of a common customer. (See Figure 6, page 305:10.) In this model pre-award and post-award specialists work in the same physical location, use the same system, report to the same person, have the same client portfolios, often supervise a common set of generalists (lower-level staff new to research administration), and feel jointly responsible for the same set of deliverables. In this model pre-award and post-award team members meet together with the client, the principal investigator, and his or her local research administrators to resolve issues.

Another model, not shown, would be similar to that of University D but instead of pre-award and post-award specialists, the team would be composed of staff members who each individually had the skills to manage the pre-award and post-award functions of a portfolio. This model likely would work for only very small colleges where resources and demand would not support resource specialization.

Regardless of the model in place at an institution, one theme repeatedly voiced by sponsored research professionals is the importance of pre-award and post-award staff sharing physical space. In situations where pre-award and post-award staff are physically separated, experience shows that work is not going to flow as smoothly and communication problems are bound to arise. Co-location is something worth insisting on, as it can help ensure effective communications and ward off problems later in the award process.

During an audit it is a fairly routine procedure for audit staff to interview all those who have a role in an award’s life cycle. When responses are given that demonstrate a lack of coordination of and agreement on basic terminology, grants management systems used, report data, basic procedures, etc., one can only imagine the list of potential findings and reportable conditions that could arise in the audit report. (It should also be noted that it is not uncommon to find ill will between uncoordinated, physically remote, organizationally distant groups. Obviously, internal customers and external constituents are not well served by such feelings.)

Reminder

Institutions risk having their customer service suffer where pre-award and post-award are separated, either organizationally and/or physically, where pre-award and post-award are located remotely from the main campus (and/or at different remote locations), where staff report to separate managers through separate leadership lines, and where different systems for conducting pre-award and post-award business are in use. Further, in cases where pre-award and post-award offices generate different reports for monitoring proposals, awards, and accounts, problems could easily arise for an institution during audits.
Skills Needed for Specific Sponsored Programs Staff

What are the types of skill sets needed to perform each of the main functions in an office of sponsored programs? There is much overlap and some specificity/specialization in core competencies needed to be successful in each of the four functional sponsored research areas described above (pre-award, post-award, cash management, and cost accounting). Skills and knowledge needed for each of these jobs are discussed below and sample job requirements listings for staff in these four areas are included as Figures 7-10. (Note that these figures contain sample job requirements postings; position descriptions for these jobs will vary from institution to institution, in part reflecting the institution’s funding portfolio and organizational needs.)

In reviewing the skills and background required for these jobs, key general staff “competencies” emerge including:

◆ knowledge of sponsor (usually federal) policies and regulations,
◆ financial or accounting skills,
◆ understanding of the institution’s financial and grants management systems,
◆ communication skills, and
◆ attention to detail.

In reviewing the requirements postings, one can see how interdependent award staff members are and appreciate the critical need for staff coordination to manage effectively the award through its life cycle.

Pre-Award and Post-Award Professionals

Within the functional areas of pre-award and post-award, there are various levels of positions — junior, mid, and senior. These levels exist to support the varied responsibilities that accompany proposal review, acceptance, reporting, accounting, and cash management. This type of stratification within the OSP also is necessary to differentiate levels of tasks and the skills needed to accomplish those tasks to create opportunity for personnel advancement and growth.

There are many ways to categorize tasks for different staff levels. One way is by “level of difficulty.” For example, senior-level pre-award staff may have, in addition to their regular, assigned portfolio of departments to assist, responsibility for the most difficult proposal negotiations, which are usually with industry sponsors. Senior people may have within their portfolios the most difficult departments with which to work. A department can be difficult to deal with for many reasons including that there are notoriously independent PIs located in the department, the department has complex sponsored agreements involving multiple subcontracts, or the department has new administrators who need more-than-average assistance to get reports completed.

Mid-level pre-award or post-award administrators may be assigned the more-difficult-than-average award portfolios and given the additional responsibilities, for example, of working with the general counsel on training for human subjects and export controls. Junior-level staff, the least experienced pre-award and post-award specialists, might work with those departments with low sponsor volumes, which is
generally true, for example, of humanities departments as opposed to life or physical sciences departments.

*Pre-Award.* A candidate for a pre-award specialist with “experience” might include someone who held similar positions in other universities, nonprofit institutions, or hospitals; has foundation grant-writing experience; or was a program officer for a federal sponsor. Many sponsored research administrators find that attorneys have transferable skills that make them good candidates for the position of pre-award specialist.

It is suggested that the level of formal education sought should be “bachelor’s degree required; advanced degree preferred.” The type of degree an individual has can vary but it will likely be liberal arts in nature, as there are limited formal education programs for research administration. (Although this is likely to change. It is easy to envision there one day being a common degree-granting program in the sponsored research field, given the complexities, knowledge required, and expanding purview of the sponsored research professional.)

An advanced degree in the humanities, social sciences, law, or business would likely give an individual the transferable technical tools to perform proficiently in pre-award positions. Of course recruiting from a research department within the university is an excellent idea for many reasons, including that the individual would have an appreciation for the department perspective and have existing relationships within the department.

The years of experience required for a pre-award specialist will vary according to the level being recruited, but a working guideline is

- five-to-ten years experience in the research administration field for a senior-level person,
- five-to-seven years for a mid-level person, and
- one-to-three years for a junior-level pre-award specialist.

A sample job requirements posting for a *pre-award specialist* is included as Figure 7.

*Post-Award.* In the post-award area, good candidates for entry-level research administrators would be recruited from accounting firms and from general accounting and internal audit departments within universities, hospitals, and nonprofits. Experience suggests that individuals with backgrounds in the insurance and banking professions have skills easily transferable to the post-award specialist role. As with pre-award personnel, recruiting from within the institution can often be a good idea as these candidates likely possess the requisite knowledge of “how it is done in the department” and the relationships to “get it done” in the central office.

The years of experience will vary according to the level being recruited, but, as is true for a pre-ward specialist, a working standard is five-to-ten years experience in the research administration field for a senior-level post-award person, five-to-seven years for a mid-level person, and one-to-three years for a junior-level specialist.
A job requirements posting for a post-award specialist would have some similarities to, but also some differences from, that of the pre-award posting. A sample posting for a post-award specialist is included as Figure 8.

**Figure 7: Sample Job Requirements Posting for a Pre-Award Specialist**

Applicant should
◆ have broad knowledge of pertinent federal regulatory documents including OMB Circulars A-21 and A-110; the Federal Acquisition Regulations; and the Cost Accounting Standards;
◆ have proven abilities to analyze complex problems and communicate (orally and in writing) effectively with multiple internal and external constituents including faculty members, their staff members, sponsors, auditors, and internal and external counsel;
◆ be knowledgeable about and conversant in grants management and contracts terminology and familiar with common references to grants management systems;
◆ be knowledgeable about federal sponsored research compliance requirements concerning human subjects, animals, export controls, USA Patriot Act regulations, etc.; and
◆ possess skills that demonstrate strong attention to detail and an ability to manage multiple tasks.

**Figure 8: Sample Job Requirements Posting for a Post-Award Specialist**

Applicant should
◆ have broad knowledge of pertinent regulatory documents including OMB Circulars A-21, A-110, and A-133, the Federal Acquisition Regulations, and the Cost Accounting Standards;
◆ possess demonstrated financial accounting skills and be able to reconcile accounts, produce financial reports in sponsor preferred format, and run internal grants management reports from institution’s accounting and data warehouse systems;
◆ be familiar with budgeting as required by federal and federal agency-specific guidelines;
◆ have knowledge of financial compliance subject areas such as: time and effort, payroll certification, equipment reporting, cost transfer regulations, cost allocation schemes, and federal regulations governing the use of human embryonic stem cell lines;
◆ have proven abilities to communicate (orally and in writing) effectively with multiple internal and external constituents including faculty members, their staff members, sponsors, auditors, and internal and external counsel;
◆ be knowledgeable about and conversant in grants management and contracts terminology and familiar with common references to grants management systems; and
◆ be able to demonstrate strong attention to detail and an ability to manage multiple tasks.
Accounting Professionals

While research administration professionals in general can be quite difficult to find in the marketplace, the subcategory of research administration professionals who are cash management and cost accounting/cost analyst professionals are even more difficult to find.

Cash Management. The manager of cash — or cash manager — is a position for which one needs very strong accounting and analytical skills, as well as excellent communication skills. For the position, a candidate who is a certified public accountant (CPA) or has extremely strong demonstrated financial accounting skills is critical. The one advantage in recruiting for this position is that strong grants management skills are less important than strong accounting skills. Of course finding both in a candidate would be ideal.

The cash team is usually much smaller than the pre-award and post-award sponsored portfolio teams and may be structured with one manager (with five-to-seven years experience and is a CPA) and one or two cash specialists (with one-to-three years of experience who have accounting backgrounds but are not necessarily CPAs). These less-experienced individuals might be responsible for management of lower-volume letters of credit (from the National Endowment for the Humanities, for example), with oversight from the manager of the cash group. The cash specialists are also responsible for depositing and posting checks and posting wire transferred funds to the correct account.

A sample job requirements posting for the cash management specialist is included as Figure 9.

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Figure 9: Sample Job Requirements Posting for a Cash Management Specialist

Applicant should

- be able to manage the institution’s cash flow from federal sources by accessing the federal letters of credit in a timely and accurate way;
- have a thorough knowledge of and the ability to implement best practices for cash collection and management in order to assist pre- and post-award staff with non-letter-of-credit cash collection (checks, wire transfers, etc.);
- possess a knowledge of the institution’s accounting system and chart of accounts;
- have the ability to build strong relationships with personnel who oversee cash appropriation to grants and contracts;
- be able to forge strong relationships with other related offices — such as payroll, central institution’s internal bank, accounts payable, and travel;
- have a proven ability to perform detailed, complex account reconciliations;
- have proven skills in cash management and accounts receivable management; and
- be able to work with constituents to predict ebbs and flows of cash needs.
Cost Accounting. As mentioned previously the cost accounting competency is an “acquired” skill, meaning that it is not quickly grasped in most cases by those who have not worked previously in the specialty area. Further there is no degree-granting program where one can acquire the skills through coursework. Many of the people in this field are “homegrown.” That is, they have been in this specialized area for a long time and began as junior cost analysts.

On the other hand, there might be certain jobs where cost accounting candidates could acquire skills that would be transferable to research administration. One can imagine, for example, that preparation of the Medicare cost report, required annually from hospitals for Medicare cost reimbursement, is one concrete task that could help an individual develop the requisite skills for a position in cost accounting in an OSP. Degrees in accounting, coupled with a CPA certification, are educational qualifications that one often sees people in this field having, and the technical skills mastered in acquiring these credentials can be important skills to have in the position.

The cost analysis team is typically a smaller team than the pre-award and post-award life-cycle teams. Normally the director of the team will need 10 or more years experience given the responsibilities inherent in this function. There may be one or two supporting analysts on the team, each of whom would have three-to-five years experience in cost accounting or cost analysis.

A sample job requirements posting for a cost accountant/cost analyst is included as Figure 10.

**Figure 10: Sample Job Requirements Posting for a Cost Accountant/Cost Analyst**

Applicant should

◆ have an in-depth knowledge of the federal OMB circulars, the Cost Accounting Standards, and the requirements of the federal disclosure statement (DS-2);

◆ be familiar with cost accounting financial models and systems;

◆ have the ability to negotiate with federal cost accounting representatives from the U.S. Department of Health and Human Services, the Office of Naval Research, or both;

◆ have in-depth knowledge of financial compliance regulations and the impact of those regulations on the business of research;

◆ have a demonstrated ability to work effectively with faculty and administrators at all levels on compliance issues;

◆ have the ability to assist in developing and delivering financial compliance training across the institution; and

◆ be capable of facilitating the annual A-133 audit by organizing appropriate response teams in a timely, effective manner.
Organizing Work Flow

How is work generally organized within the organizational models discussed above? In some of the more traditional organizational models for offices of sponsored programs, the work is organized around the sponsor; for example, a pre-award specialist and a post-award specialist will work only with National Institutes of Health (NIH) awards or only with foundation awards. While this model allows for a high degree of specialization, it is not always the best approach for the customer, as he or she must work with multiple individuals if there is an array of sponsors within his or her portfolio.

In other cases the pre-award person working on NIH awards may also have responsibilities for a piece of a National Science Foundation (NSF) award, while the post-award person working with NIH awards also may have responsibilities for a piece of a Department of Defense award. In such a scenario, because there is not a clean matching of pre-award and post-award personnel and sponsors, several individuals could be working with the same investigator on his or her portfolio.

From a staff retention vantage point, the research administrator should consider that the variety afforded staff in working with an assortment of sponsors likely would be more interesting and engaging than when their work is focused on only one sponsor. Of course changing portfolio assignments on a regular basis is one solution to assuring variety; another approach would be periodically cross training staff on a mix of sponsors.

Using a Scoring System

One question that is frequently asked in organizing an office of sponsored programs is: “How can one assure balance and equality in a staffer’s portfolio mix?” This is a very difficult question to answer. One possible answer is a scoring system, developed jointly by management and staff. The attributes to be scored could include:

◆ complexity of award (Does the award involve export controls or human embryonic stem cell work, for example?);

◆ whether the award is a training grant (It is well understood that the reporting requirements for training grants are more comprehensive than for the average federal award.);

◆ the degree of difficulty in dealing with the sponsor (For example, the National Aeronautics and Space Administration is known for having difficult award terms, high turnover, and a high degree of decentralization, so there are often multiple points of external contact on the same award.);

◆ the level of expertise at the local level (The less experienced the staff locally is, the harder it may be to move the proposal and award along.);

◆ the level of expertise of the staff managing the portfolio (Is the person new, and therefore will he or she need more hands-on help, or a senior person who has been managing grants for years?);

◆ whether the portfolio contains industry sponsored awards (These can be quite complex and involve protracted negotiations.); and
overall volume within the portfolio. (A medical school might account for a larger overall share of total award and dollar volume of the university’s research portfolio than another college or department; therefore the medical school team would receive a higher score on the volume attribute.)

The important point here is that some process to score the portfolio, jointly developed by management and staff, is a starting point in developing a system of indicators to allocate resources. (See Figure 11.) (For example, Harvard University performs a portfolio scoring exercise annually and usually ends up moving a staff resource or two around the teams to offset changes in overall score based on ever-changing events within the portfolios.)

The bottom line to remember is that achieving a “balanced” load to everyone’s satisfaction is nearly impossible and is more an art than a science. The challenge is to engage everyone in the process of trying to determine how to balance the portfolio properly, while acknowledging that management will make the hard calls when there is staff disagreement over, for example, whether training grants should be more heavily weighted than foundation awards with unusual terms.

**Staff Size**

Another frequently asked question is exactly how many staff members are needed to support the research enterprise? The general rule of thumb is the number of staff needed depends on the size of the research enterprise. As we drill down into the details, the answer becomes complicated and situational and often is mired in internal politics surrounding resource allocation. If the research administration team is established and has wide experience, perhaps there are economies of scale to be realized; that is, a higher level of productivity can be expected because the group is experienced, knows their points of contact well, and has handled a variety of proposals with a variety of sponsors.
In determining staff levels, it may also be helpful to look at recent growth in sponsored activity. If the institution’s portfolio has grown by 25 percent, for example, over the past five years and no staff have been added, it may be useful to examine the account setup backlog, staff turnover, hours staff are working, vacation backlog, subaward turnaround time, and other pertinent data. The data could be useful in making the business case for additional staff or in re-organizing workflow. It could also be useful to compare the institution’s staffing levels with that of other organizations that have similar research volume, although depending on the similarity in organizational structure, such comparisons may or may not be appropriate.

**Major Risk Areas**

What are the major risk and opportunity areas on which sponsored programs officials should focus their efforts? Certainly not all functions of research administration carry the same risk. Research administrators tend to stratify risks into three categories:

1. **Transactional risk**: Is this cost allowable to this award? Is it allocable to this award? At this relatively low risk level, the administrator looks at an actual charge posted to the award and assesses its pertinence to the sponsored project and related tasks.

2. **Specific-sponsor risk**: At this risk level, the sponsored programs administrator is concerned with compliance with specific agency-imposed conditions. It is important for the institution to be aware of the impact of noncompliance on an individual award and the entire portfolio of awards from an agency to the institution.

3. **Institutional risk**: Does the institution have systemic issues of noncompliance? Do investigators understand that they are ultimately responsible for every aspect of this award: financial, compliance, fulfillment of deliverables, etc.? At this highest level of risk, a research administrator is concerned with ensuring basic compliance with internal controls and that everyone involved shares the same understanding with regard to responsibilities, and what the risks are if the necessary controls do not exist or are weak or are not properly implemented by staff.

One challenge for the central sponsored research office is how to organize staff at all levels to distribute effectively responsibilities for monitoring risks associated with overseeing proposals and awards. How can the sponsored research administrator be assured that the team is paying attention to all kinds of risks and not focusing too much on any one type? Assessing the various types and levels of risk for an OSP is an ongoing exercise that should be done frequently by OSP staff and a team of people who represent various areas within the institution including, but not limited to, office of general counsel, office of risk management, and college deans. The team may not necessarily ensure that the right risks are being focused on, but with such a team and a process in place, the institution could better mount a defense if questioned by an external audience as to why more attention was not paid to a certain risk area.

Keeping up with the OSP day-to-day operations can be overwhelming, leaving little time for the research administrator to step back and evaluate risk throughout the entire research portfolio and institution’s research enterprise. Perhaps this is the job of the OSP director or his or her supervisor together with other key business partners.
such as internal audit, controller, and heads of schools’ central offices. Certainly the institution’s audit committee should be involved in asking questions about risk and engaging the right parties to assess and report back on various types of risks and measures being used to control them. Once risks are identified the OSP director can work with his or her management team on developing the proper training, if necessary, and other methods of addressing the problems with the pre-award and post-award specialists, faculty, and staff at the college and department levels as appropriate.

305.7 Future Demand for Talent

What will the future demand in terms of new skill sets for personnel in sponsored programs offices? There are two notable staffing trends in research administration: one is the need for funding development specialists and the second is in the area of grants administration information technology.

Funding Development Specialists

Generally faculty members tend to work independently or only with close departmental peers on funding ideas and proposal development. Certain areas within the institution, such as the life sciences bioanthropology specialty, have trouble locating their funding niche. (And, in the case of this specialty, currently there are not many sponsors funding this work.) Sometimes social scientists who are able to attract foundation sponsors wonder what federal opportunities might exist if they could only partner ideas in some way with their colleagues in the life sciences.

To address these problems and broaden faculty interdisciplinary collaborations in general and support specialty research areas, many offices of sponsored research have created a new staff position — that of a funding opportunity specialist. This person is located in the central OSP but works locally with unrelated departments to scour federal funding opportunity databases to see how certain investigators might partner with others to advance their ideas at the federal level. The funding development specialist would be responsible for working with investigators from seemingly disparate disciplines on their ideas and helping them develop their proposals. The campus, being fairly stovepiped in design, often does not allow for easy collaboration among unrelated parties without such an external driver. The funding opportunity specialist acts as the catalyst for research cooperation and collaboration. (See Figure 12, page 305:22, for discussion of a pilot project involving a funding development specialist.)

Electronic Information Specialists

There are separate chapters of this book devoted to electronic grants administration and information systems, so these topics will not be covered here. (See Chapters 900 and 700, respectively.) Suffice it to say, therefore, that given the sponsored research community’s ever-greater dependence on the Internet and electronic communication, it may make sense in terms of organizational structure to have those individuals who are working on grants.gov and other grants management information technology projects — from the implementation of MIT’s COEUS® System or Peoplesoft for grants or
whatever enterprise resource planning (ERP) software solution or stand-alone system is chosen — reside within the sponsored research office if they don’t do so already.

Many sponsored programs administrators have struggled with the right model to integrate systems analysts and programmers with business/end users over the last few years as they have implemented ERP and other electronic systems. While there is no doubt there are many models to choose from, it is hard to imagine the analysts and end users not working together side by side. (See Figure 12 for a discussion of a project involving business and technology specialists working with the office of sponsored programs.)
¶305.8 Considerations for Small Institutions

The discussion thus far has focused on large and medium-sized research institutions that have the award capacity to support a broad research administration organization that includes pre-award, post-award, cash management, and cost accounting/financial compliance professionals. What about small research organizations that do not have this capacity?

In many ways small institutions carry the most risk because often not only is a single person responsible for pre-award and post-award administration but he or she also is responsible for certain aspects of fundraising/development or has controller responsibilities. On the other hand, as the scale of its research is smaller, the smaller institution is less likely to attract national audit attention as fewer overall dollars are at stake.

The federal government only distinguishes between large and small research entities in two respects:

◆ Schools with less than $25 million in sponsored expenditures in a given year are not required to submit a disclosure statement to their cognizant agency.

◆ Schools with less than $10 million in organized research base can file a simplified F&A cost rate proposal.

Thus the “one size fits all” approach for every other aspect of research administration can certainly make life extra challenging for those who wear several hats within a small institution. Small offices likely will need to develop a compliance infrastructure to meet institutional obligations, perhaps based on one of the models presented, but certainly crafted in response to their own unique circumstances and portfolio sizes. (For an in-depth discussion of special issues for predominantly undergraduate institutions, see Chapter 2300.)

The sponsored programs compliance arena is becoming ever more complex; there have been new regulations issued just in the last decade regarding human subjects, export controls, and the USA Patriot Act. Some in sponsored programs have speculated that such growing compliance rigor could very well put all but the most vigorous emerging research entity completely underwater and potentially right out of the research enterprise.

¶305.9 Conclusion

The old adage, “you’ve seen one organizational model in research administration, you’ve seen one model in research administration,” is still very true. The organization of many sponsored programs offices have developed “organically”; that is, often with little formal planning, but rather as a result of the competencies and preferences of the offices’ personnel. The business of research administration, however, is one which has grown sufficiently complex and “risky” that a research administrator would be well advised to step back and ask if the office’s current organizational model makes sense from business process, customer relations, and audit management perspectives.
The current external regulatory environment, together with the advent of sophisticated data management and resource planning systems and electronic grants management, is forcing a certain amount of efficiency and “best practices” on all sponsored programs offices. Although change is not always easy or without consequence, incremental steps toward highly coordinated, goal-sharing, customer-oriented teams is a model that colleagues in industry adopted years ago. This approach may be something for college and university sponsored programs offices now to consider, if they haven’t done so already.

One place to start if an OSP is considering altering its organizational model is to look at best practices from peer institutions and of course ask customers how the office can best serve their needs.¹ (For an in-depth discussion on assessing the sponsored programs office and organizational evaluation techniques, see Chapter 3900.)

¹ In considering any organization or reorganization plan, a research administrator may also wish to look at the National Council of University Research Administrators’ (NCURA) micrograph entitled The Role of Research Administration. See www.ncura.edu/bookstore/default.asp.
Supplementary Material

This section includes expanded coverage of topics relating to organizational models and the job of research administration. These materials are culled from a variety of authoritative sources.

Moving Tips*
Bo Bogdanski, Colorado State University

I recently completed a job change, moving from one university to another in a neighboring state. Now that the move is complete and I reflect on the events of the past few months, it occurred to me that I followed a series of steps and decision points. Admittedly, I wasn’t this organized when I began the process. I hope by writing this article, I can assist fellow members who are contemplating a similar move. Here are ten points I suggest you consider if you decide to change locations.

Start Networking Early
First, define your objective. Do you want a promotion, a lateral position or a career change? Find out what might be available based on your objectives by using networking techniques. Determine if you have the skills and background to be considered for such a position. Talk to as many knowledgeable people as necessary to help you determine if your objectives are truly attainable. If not, develop a plan and timetable to reach your goals. Ask network contacts to refer you to others who may give you objective advice or help you refine, expand or further develop your goals.

I suggest you ask your network contacts to be discrete as you may decide that after this initial analysis a career move may not be appropriate for you in the near future.

Make the Commitment
If you decide that a job change is right for you, define some parameters (location, pay, job title, timing etc.). Inform your network contacts of your decision and look for ways to further expand that network. Always ask one contact to refer you to at least two others. Use meetings and conferences to intensify and expand your knowledge of potential opportunities. Decide who within your current organization ought to be part of a “secure” network. I suggest you don’t widely advertise your intentions within your current organization until a job offer is firm and accepted. Continue to perform at the highest level of professionalism at your current position as you continue your search.

* This article is reprinted from the NCURA Newsletter, Vol. XXXVII, No. 4, September/October 2005, published by the National Council of University Research Administrators. It is used with permission of the publisher.
Write a Resume Not a CV

Write or update your resume. Find a good resume book and follow the advice. Although we work in an environment of multi-page curriculum vitae, I still suggest a limit of a two page resume and a cover letter specifically addressing the open position. Have someone critically critique your resume. I found many places preferred a downloaded resume onto a local system and/or the organization used an on-line series of questions as the preferred application method. Be flexible and follow the instructions.

Develop a Well-Rounded Set of References

Think of people who know you, your abilities, and most of all your potential. Try to find people both within your current environment and outside your daily sphere. Be sure your references are willing to take the time and make the effort if called upon. References must present themselves well on the telephone. I asked three NCURA members from across the country as well as a department chair, a department administrator and a division director from a related organization within my institution.

Prepare for the Interview

Hopefully the newly acquired resume book will tell you how to dress and present yourself for the interview. But physical preparation is not enough. Find out about the interviewing organization and the people who will be involved in the interview. Have a few facts ready during the interview to show off that preparation. Use the web, network contacts and the library as possible sources of information. If the interview is over the phone, clear the phone area of all distractions, shut off your computer, cell phone and radio, and close the door. If the interview is in-person, there is never a time the interview is over, until after you accept the job offer. Always assume you are being interviewed especially during casual conversations and meals.

Prepare an Exit Plan from Your Current Organization

Once you have received an offer and are willing to accept, decide if you will consider a “counter offer” from someone at your current location. Sometimes the counter-offer may not materialize which should not deter you if you are fully committed to the transition. Research your current institution’s resignation policy and analyze the needs of your new organization. Consider personal needs and time needed to transition. When you have developed the plan, I suggest you discuss options with your current supervisor before you prepare the resignation letter especially if you are thinking of something different from the “normal” resignation rules.

Be Gracious with Accolades, Awards, or Gifts

When you make the final decision and there is some sort of formal “announcement,” various groups of people from your current organization may want to recognize your contribution either through personal contact or some sort of social event. Always keep your discussion or remarks positive, up-beat, and toward the future, this isn’t the time to start “burning bridges.” Accept all invitations to social events because people genuinely want to say “good-bye” and you’ll want to continue to develop professional relationships with many of these people.
Make an Extra Effort to Clean Up Your Desk
Now that your decision is public, you will probably not take on any new long-term projects, so you should have time to get your ongoing work into good order. After your current organization helps you develop a transition plan for your work, make a conscience effort to get things as caught up as possible. Make notes for the file, explain difficult long-range issues to a co-worker or tell your agency counterparts you are leaving and ask them to help you complete necessary tasks. Departed workers are an easy scapegoat for blame and you will probably be a “departed” target too, so don’t provide any additional ammunition. The people who count will know you left on a positive note.

Keep Your New Supervisor Informed
An infrequent e-mail or phone call to your new office communicating your transition actions and plans will help your new organization prepare for your arrival. You don’t have to give day by day details but just an occasion “hello” gives both sides the feeling that things are still on track. Also, find one important person in the new office that can answer the day-to-day questions so you aren’t bothering the supervisor with those types of inquiries. Finally, look at your new organization’s web site for answers to Human Relations questions, parking, orientation, and similar items of personal interest. Your objective should be to show up with many of your questions already answered.

Close the Door and Don’t Look Back
You have defined your objectives, developed your plan, gone through the interviews and made the decision. So much thought and work should give you a good feeling that you’ve made the right choice. Don’t suffer from “buyer’s remorse.” Surely you are leaving with some good memories (and maybe a few bad ones too) but you are now ready to start that next part of your life. Shut off the light, close the door and don’t look back, there are lots of opportunities in front of you.
Observations on Building Offices of Opportunity

James Casey, The University of Texas at San Antonio

In the present climate of a new presidential administration, uncertain funding priorities, and increasing regulatory burdens, it is still important for institutions of higher education to establish, expand, and/or strengthen sponsored programs and similar associated offices. Why is this important? It is important because a productive office can generate greater value for its institution, especially at a predominantly undergraduate institution or emerging research institution. The need remains, but the justification for it may change. In other words, these offices are necessary regardless of whether the economy is prosperous or in the doldrums.

As a research administrator, I have established two sponsored program-related offices and expanded a third to full-time status since 2000. The experiences gained during those tenures are priceless in developing a unique perspective on research management. As a result, I offer the following observations and tips to research administrators who have the opportunity to build or nearly build from the ground up.

Remember the “Big Picture.” It is easy for research administrators to fall into the trap of focusing on the trees and ignoring the forest; this is quite common. Obviously, a prompt and professional level of service to faculty and staff is of paramount importance. Building bridges on campus between previously isolated academic units is another Big Picture item commonly mentioned in developing grants offices. Building two-way relationships with funding agencies is also critically important.

Move beyond the processing mindset. Sure, grants offices, regulatory offices, and contracts offices are on one level processing offices, the efficient movement of paperwork between internal and external offices. But more significantly, such offices are offices of opportunity: opportunity to engage faculty and remove negative impressions; opportunity to develop new ways of doing business; opportunity to find new intellectual opportunities and partnerships. Developing offices of opportunity gives the research administrator the chance to craft, to leave a stamp beyond bureaucratic efficiency. Moving beyond a processing mindset is important regardless of what the official “mission” of the office may be.

Reconsider and visualize your office’s role in the university structure. Working with more senior leaders in your areas of the university, visualize a different reality a year from now. Do you want an office which plays an integral part in delivering your university’s research agenda and of which you can be proud? Visualize how to achieve it.

1 This article is reprinted from the NCURA Magazine, Vol. XLI, No. 1, February/March 2009, published by the National Council of University Research Administrators. It is used with permission of the publisher.

2 The author thanks Saveria Dimasi, Director of Legal Services at the University of Melbourne, for her feedback during preparation of this article.
Think strategically and laterally. This is the “Big Picture,” coupled with the desire to implement on a consistent, vigorous time schedule. It will help you achieve a different role for your office in the university structure. Priorities need to be set, whether they are developing policy and procedure, faculty outreach, or training for other university staff. Thinking strategically also allows for being “creative,” a word not usually associated with research administration.

Communicate well. University research administrators need to do a better job at communicating consistently and precisely to internal and external partners. It is no longer enough to do just enough communication between heavy deadlines. One topic that research administration should focus more on is communication between research administrators in a hierarchical structure. With stronger internal communication, job satisfaction increases, and productivity is enhanced.

These conclusions are part of the essence of the two Laws of Communication as outlined by Dr. Richard Schuttler (www.lawsofcomm.com), a project involving this author: (1) Failure of supervisors to communicate with subordinates results in poor employee performance; and (2) Failure of the organization to effectively communicate results in poor organizational performance.

Build technical expertise. Not only is this necessary within your office, it is also necessary at the department level. Central administration must insist that departmental administrators strengthen their expertise. In many cases it is no longer enough to rely on central administration for service and allow departmental administrators to just “get by” or to be inadequately trained.

Create a professional and welcoming office atmosphere. Create an office that constituents will want to visit and staff will want to work in — for its “vibe” as well as its appearance. Be proud of your entrance areas, where the faculty come for meetings or drop paperwork off. Create something beyond that of the normal bureaucratic mindset. Create uniqueness.

Learn from the past. “Those who don’t learn from the past are condemned to repeat it.” We have all heard this phrase, but what does it really mean for research administrators? If you are creating a revamped grants office, listen to what faculty and staff say about the office as it was before. What was good and bad about it? What did it facilitate and what did it prevent? As I have said for a number of years now, create a culture of “yes,” not a culture of “no.”

Instill a mindset of lifelong learning. As leaders in the office, directors and assistant directors should create a culture of lifelong learning in the profession. Any research administrator worth his or her salt knows that staying current in the field is a professional necessity. Falling behind, as measured by professional training, is no longer an option. Professional development programs, such as those offered by NCURA, are an integral component of this observation.
Know when to fit in. Know when to stand out. Research administrators are used to fitting in and knowing their place (as second fiddle to the faculty, in general). But, one thing I have learned after fifteen years within the profession is that it is good to stand out — at appropriate times and in measured doses. Be assertive when necessary — whether on behalf of your institution or your staff. Call it as you see it, but always in a constructive manner. And always be mindful of the Big Picture. This goes to the broader lesson that effective research management is part art, part science.

Share credit. Sharing credit with others is one of retired Gen. Colin Powell’s rules for success, as articulated in a recent issue of Success Magazine (February 2009). In fact, I would go further than that by saying that always give others credit first, then pat yourself on the back. Remember, research administration is a team sport.

Conclusion
In these most interesting of days for our country and for the research administration profession, it is imperative to rethink our profession for the challenges ahead of us. We expect our Washington representatives to change. We elected a new president based upon his promises of change. It is only appropriate that we should change — to make the profession stronger and more valuable. The question is: Do we have the desire and will to change? An equally important question is: Is bureaucratic inertia too strong to allow for change?

This need to change and think differently is especially true in the area of building offices of opportunity. As a research administrator, stretch your skill set by building such offices. Whether or not you stay in smaller research administration offices, your professional skill set and experience base will be permanently stronger. And that is what I call a win-win situation.
Researchers’ Relationships with Pre-Award and Post-Award Offices: Bridging the Gap
Kristine M. Kulage and Ruth E. Torres

Reflecting on the theme of the NCURA 52nd Annual Meeting, “At the Confluence of Creation and Collaboration,” which centers on the interdependent relationship between the researcher and the research administrator, my colleague and I joined forces to explore the differences between researchers’ interactions with pre-award administrators and post-award administrators within a biomedical research institution. The inherent differences in the types of services these offices provide establish a precedent where faculty members are likely to interact differently with the two offices.

In her article, “Pre-Award Administrators are from Pluto, Post-Award Administrators are from Saturn; Or Are They?” M. Spina isn’t afraid to tell it like it is: “Pre-award administrators are the good guys and post-award administrators are the bad guys.”

During the past year in our department, we have worked diligently to bridge the gap between how faculty perceive and interact with our pre- and post-award offices, and we have already made substantial progress. The first step we took in bridging this gap was to recognize the fundamental differences between the offices.

Pre-Award Administrators: “The Good Guys”

Pre-award administrators are seen as “the good guys” for one obvious reason — everything they assist researchers with is directly related to a positive end result: a funded grant. From the dissemination of program announcements to initial budget meetings and coordination with faculty in other departments, pre-award administrators set up their researchers for success from day one. By editing biosketches, checking grammar, inserting graphics, and uploading electronic attachments, they play a critical role in ensuring the final product has the highest potential for funding. They help faculty recognize budget gaps, assist with application neatness and compliance, and complete administrative elements of a proposal, allowing researchers to focus on the science.

Pre-award administrators also may develop templates for grant sections and deliver presentations to faculty about developments in the research world. Although the scope of pre-award office duties extends beyond grant submission, when there are grant deadlines, all other work is likely set aside, and researchers have the of-

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1This article is reprinted from the NCURA Magazine, Vol. XLII, No. 5, September/October 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher. Kristine M. Kulage is Director, Office of Research Resources, Columbia University School of Nursing and Biomed Corner Contributing Editor of NCURA Magazine. Ruth E. Torres is Director of Finance, Columbia University School of Nursing.

2Spina, M.T. “Pre-Award Administrators are from Pluto, Post-Award Administrators are from Saturn; Or Are They?” The Journal of Research Administration, Winter-Spring 2000.
Office’s undivided attention. This teamwork attitude immediately places faculty in the frame of mind that pre-award administrators are “on their side.” They don the virtual “white hat” in the world of research administration, and in the best of relationships, they are viewed as valuable members of the research team.

When a grant is submitted, pre-award offices are often complimented by relieved researchers with “I couldn’t have done it without you.” And, when a grant is funded, pre-award officers rejoice with their faculty members in celebrating the accomplishment. Pre-award offices often disseminate announcements about funded grants, singing the praises of our researchers. I have often been the recipient of tokens of appreciation from researchers who are elated to have their grant funded and eager to recognize the “heroic” role the pre-award office played in making it possible.

The funded project is then handed off to the post-award office, similar to a baton in a relay race, for implementation and account set-up. The pre-award office has cleared their plate, making room for the next submission. When this transition is overly distinct, it contributes to the overall gap. Just as researchers view institutional sponsored projects offices more as a barrier than a partner in conducting biomedical research, the same relationship can develop between researchers and departmental post-award offices.

Once the grant is awarded, the post-award office is immediately perceived as policing the project and erecting roadblocks to conducting the science that faculty worked so hard to fund. To complicate matters, post-award offices typically do not participate in the pre-award steps of grant preparation. Yet, once funded, post-award offices are expected to monitor a project about which they have little previous knowledge.

**Post-Award Administrators: “The Bad Guys”**

Post-award administrators sport the virtual “black hat” in the world of research administration, and in their relationships with researchers are viewed as the “sheriff” cleaning up the town. When project spending is going smoothly, researchers are content; but, when a lapse in post-award compliance is identified that affects the research, it is often perceived negatively. Rather than viewing the post-award administrator as a positive team member who is looking out for their safety, the researcher often views their involvement as overly cautious or even unnecessary.

“Post-award administrators fix problems with proposals, unsnarl bureaucratic red tape and move on to the next problem. Unfortunately, they are often associated (at least in the faculty member’s mind) with the problems they are trying to fix.”

They are seen as bureaucratic, trapped in the confines of institutional policy constantly standing in the way of scientific progress. If there is a good relationship between faculty and the post-award administrator, there is an unspoken expectation that in times of doubt the administrator will coach them out of the particular situation. But when the recommendation fails, so does their reputation with faculty.
Post-award administrators in biomedical institutions perform a complex set of duties that are often more expansive than those of pre-award administrators. Besides managing financial affairs, post-award administrators manage human resource issues and clinical practice matters. Performance is measured by how well a post-award administrator navigates through the complexities of the institution rather than how much they assist researchers. In reality, post-award administrators are unsung heroes of research administration, helping faculty members avoid negative, project-threatening situations such as overspending and noncompliance.

Post-award offices work just as diligently for researchers as pre-award offices. They carefully monitor spending patterns, coordinate effort reporting, and conduct financial closeouts. While pre-award offices develop templates and repositories of information for researchers, post-award offices create multiple reporting tools that unravel the complex institutional financial data researchers must review, and they confirm financial reports are accurate and auditable. Unfortunately, these thankless endeavors are seldom recognized by researchers as elements of teamwork or efforts worthy of gratitude.

Joining Forces to Bridge the Gap

If the first step toward bridging the gap in how researchers interact with pre-award and post-award offices is to acknowledge the fundamental differences between the two, the second step is for these offices to recognize they are not two separate entities working in silos but are instead working in tandem throughout the lifecycle of a project. Both offices must project a “teamwork” attitude with faculty, even if the precise nature of the teamwork differs. For pre-award, it’s “working together to create a compliant, successful final product worthy of funding.” For post-award, it’s “working together to ensure that the project is conducted within all required regulations and funds are spent in the most efficient way possible to get the most ‘bang for the federal buck.’”

Faculty members realize that while pre-award administrators are fully versed in the structural elements of grant writing and in various compliance issues (e.g., conflict of interest, human subjects research), post-award administrators can navigate the complex institutional web of “red tape” and help build more accurate proposals. In addition, since post-award offices will inherit the monitoring of projects from the pre-award office once they are funded, it is essential that these administrators not be handed funded grants blindly.

It makes sense for post-award administrators to participate in proposal development, just as it makes sense for pre-award administrators to participate in the financial monitoring of projects. Can there be a united front where pre-award and post-award administrators are both viewed as heroes in the funding battle and, rather than white versus black hats, both wear grey hats? Based on this idea, our offices began efforts to bridge this gap and implemented significant changes in the way we conduct business.
No More Silos!
Successful efforts in bridging the gap between the relationships researchers have with our offices fall under one philosophy: no more silos! Phase I of this endeavor was to break down our silos physically. The pre-award office was moved from a secluded location into our school’s new centralized Office of Finance and Administration. Having pre- and post-award offices in such close proximity not only made it easier for researchers to meet and communicate with both offices, but also visually reassured them that we were working closely together as a united front.

Another physical barrier was broken when pre-award files were merged with post-award. This empowered pre- and post-award administrators to view the history of the other side of business for each project and alleviated any unintentional veils of secrecy. Along with merging paper files, information technology staff created shared virtual network folders that permitted both offices to view proposals and financial reports and to easily share important electronic information. This level of transparency has made it easier to work as a team and provide suggestions for improvement in grant procedures.

After breaking down physical silos, phase II was to eliminate the communication silos between our offices and researchers. We make concerted efforts never to refer to each other as separate entities, which helps convey that we are one team. Our offices constantly cc: each other on e-mail correspondence with faculty, whether pre- or post-award related. Our pre-award office standard procedure now includes post-award administrators’ attendance at key grant proposal planning meetings. Post-award administrators are also consulted in the final steps of grant preparation so that potential post-award budget issues are addressed prior to submission.

At the same time, our post-award office invites pre-award administrators to quarterly financial report meetings with faculty and consults with them to cross-check on spending and effort tracking. Not only has the flow of communication improved, but researchers also have a higher level of confidence in both offices by witnessing firsthand our collaboration throughout the lifecycle of a project. Thus, pre- and post-award administrators are “on the same page” when meeting with faculty.

We are beginning phase III of our efforts: cross-training. This will be the most difficult and time-consuming phase of the process, but it will be critical to breaking down remaining barriers. We are planning for pre- and post-award staff members to literally switch places one day per week to learn each other’s jobs. As directors of our offices, we recognize this may slow down work, but will pay off in large dividends. Not only will staff members of both offices have a greater understanding of pre- and post-award processes, but there will also be the added flexibility of enabled staff to provide job coverage during illness and vacations. It will speak volumes to researchers when they work directly with a pre-award staff member on reconciling an account or with a post-award staff member on uploading files in an electronic application!
From Chasm to Crevice

In 10 months, we have experienced encouraging levels of success. Faculty members freely voice their level of trust and satisfaction with both offices to higher management, as well as praise both offices directly for their expert assistance. Work flows more smoothly between the two offices, there are fewer errors in both pre- and post-award activities, and one office does not receive more credit than the other.

We have also reaped unexpected rewards, having incidentally created an environment of innovation and enthusiasm where all ideas for improvement are welcome. Best of all, faculty members feel they can turn to either office for support and have equal confidence in the information they receive. The gap, although still present, now resembles a crevice more than a chasm.
320.4  The Development and Implementation of a Research Administration Job Family
Elizabeth Adams, Gretchen Talbot, Annette Czech and Amy Kitzman, Northwestern University

Northwestern University is a private, nonprofit institution employing approximately eight thousand total staff and faculty and administering over half a billion dollars a year in sponsored programs. While “research administration” is reflected in the titles of approximately one hundred staff, it is projected that approximately one thousand staff actually perform some research administration function regularly. Thus, the development of a research administration job family had the potential for high impact at the University.

What are Job Families?
Job families are powerful tools in organizations that articulate the range of duties performed by a functional group of employees. Job families provide connection and coherence between job levels within a particular business function, as well as between larger business functions themselves. A job family additionally provides a career ladder for employees and facilitates the process of grading and posting positions for managers. A research administration “job family” was developed in-house at Northwestern University with existing full-time staff and resources. This process was accomplished on a part-time basis, over eight months involving approximately sixty employees in eight of the schools/major departments across University campuses in Evanston and Chicago, Illinois.

Since 2009, the Human Resources-Compensation Division at Northwestern University has created twelve job families for its most significant areas of business. The job families provide clearer definition, differentiation, and clarification of jobs, job evaluation, and salary grade assignments; provide for a hierarchy of progression from one level of job to another within a specific function (e.g., administrative support, research technology, research administration); define associated duties, responsibilities, and education and experience requirements, and simplify the process of creating job descriptions and promoting employees. Turn-around time of transactions (promotions and posting of new jobs) has been decreased from a previous average of six days to one day. Additionally, stronger job descriptions attract stronger candidates.

A Job Family in Action
Offices at the central, school, and departmental levels at Northwestern collaborated in the implementation of the research administration job family and used it as a platform for change shortly after its completion. The goals of the implementation were to enhance the central, school and departmental units’ organizational structures as well as increase the quality and efficiency of transactions as they relate to...
research administration. However, because of the importance of sponsored programs to many units within the University, the overarching goal was to become higher performing organizations.

When the research administration job family was completed at Northwestern in August of 2011, it was the intent of the Weinberg College of Arts and Sciences and the Office of Sponsored Research in Evanston to clarify roles and responsibilities in research administration; increase the visibility of research administration; attract and retain talent in research administration; evaluate how research administration relates to other business functions at the University; confirm reporting lines; and to provide a foundation for improved professionalism, learning, and roles and responsibilities across the entire organization. It is unlikely that these objectives would have been accomplished without job families.

Creating a Research Administration Job Family

Participants

Four full-time individuals in the Northwestern University Human Resources-Compensation Division were involved on a part-time basis in the Research Administration Job Family Project. A steering committee comprised of four director-level, senior research administrators representing the major research organizations on campus (the schools of medicine, arts and sciences, engineering and research centers) met three times for a total of six contact hours. Additional detail was provided by four focus groups comprised of a broad swath of research administrators on campus. The involvement of the full range of research administrators at the University conveyed the transparency of the project to the Northwestern Community, which was essential to the success of the project.

Procedure

Northwestern’s Human Resources-Compensation Division began the broader job family project three years ago. The first step in the job family project was to deter-

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**Figure 320.4-1: Data from the Job Family Project**

<table>
<thead>
<tr>
<th>Function</th>
<th>Number of Employees (Approximately)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrative Support</td>
<td>750</td>
</tr>
<tr>
<td>Research Technologist</td>
<td>370</td>
</tr>
<tr>
<td>Research Study</td>
<td>275</td>
</tr>
<tr>
<td>Research Administrator</td>
<td>100</td>
</tr>
<tr>
<td>Financial</td>
<td>180</td>
</tr>
<tr>
<td>Business Administrator</td>
<td>100</td>
</tr>
<tr>
<td>Marketing</td>
<td>85</td>
</tr>
<tr>
<td>Program</td>
<td>110</td>
</tr>
<tr>
<td>Information Technology</td>
<td>600</td>
</tr>
<tr>
<td>TOTAL</td>
<td>2570</td>
</tr>
</tbody>
</table>
mine the primary functions within the University (e.g., marketing, information technology, research administration, etc.). Once functions were identified, Northwestern University’s four thousand job titles were then grouped by function. For example, if the job title included “accounting” or “finance”, the job was placed into the financial job function. Figure 320.4-1 above summarizes this data:

Each function was deemed a job family. Northwestern set priorities under the job family project by beginning with functions that would impact the most employees, starting with the Administrative Support Job Family. As of today, the functions/job families highlighted in pink above have been created, as well as additional job families that were not originally envisioned.

Northwestern has employed two different approaches to create job families. If a given business function pervades the University, carrying with it compliance risks—such as research administration or finance—a steering committee comprised of senior managers (as described above) guides the creation of the family. If the function is specific to only a few units (such as animal technicians or business intelligence jobs), Human Resources Compensation works directly with the unit managers to develop those job families. Combinations of these 2 approaches are used for other families.

For the research administration job family, the steering committee provided an overall framework that included general grade levels of jobs (a total of five levels, including one nonexempt and four exempt levels) and associated factors/responsibilities (complexity of programs, pre-award, post-award, financial, compliance, and supervision). Additionally, the necessary education, experience, competencies, and on-going training were determined for each grade level of research administrator.

Focus groups composed of all levels of research administrators were hosted by HR-Compensation to more finely tune the duties/responsibilities recommended by the steering committee. The finalized Northwestern University Research Administration job family—which addresses research administration in departments, schools, centers and programs—may be viewed at the following link:

http://www.northwestern.edu/hr/compensation/job-families-descriptions/job-families/Research%20Administrator%20Job%20Family.pdf

Department and School Implementation

The Weinberg College of Arts and Sciences is large and diverse, encompassing sixty-seven distinct departments and programs, and overseeing $111 million annually in sponsored programs including its related research centers. There are six hundred fifty faculty members in the College, and their research interests range broadly from topics in the fields of Chemistry to the Classics. Currently, the titles and responsibilities of staff performing research administration functions vary significantly throughout the College. Staff may be involved in pre-award and/or post-award research administration. Reporting structures for research administrative staff are also complex and may involve both direct and indirect reporting lines. That is, staff may report directly to faculty, business administrators or to the Dean’s Office. They may additionally have indirect reporting lines to the Dean’s Office or department leadership.
When the College became involved in the development of the Research Administration Job Family it was immediately evident that this family would create an opportunity for improvement and change. The College determined that it would adopt a “soft rollout” of the job family: to make opportunistic changes during times of employee turnover.

The College’s first opportunity for implementation occurred in Spring, 2012 in the Life Sciences business office, an umbrella administrative unit for the Molecular Biosciences and Neurobiology departments. Historically, the departments had been served by two separate research administrators who only understood pre-award, rarely collaborated, had little or no backup support, and reported to 2 different Assistant Chairs. For these reasons, turnover had been significant in these positions.

The College conducted a thorough review of the two departments, and the positions within the two departments, and made the decision to utilize the new Research Administration Job Family —it was decided to upgrade the job descriptions and change the reporting structure. The College had confidence that over time the job family would be a critical piece of a larger, successful implementation. Once the plan was formulated in detail it was presented initially to department chairs and, once approved by leadership, to all staff. The following outcomes are a direct result of implementing the job family:

**Lower turnover rate:** research administration jobs are now more intelligently interconnected, creating the beginning of a bona fide community of research administrators

**Career ladder:** provided a clear path for professional growth for research administrators

**Job satisfaction:** created a culture in which there are clear job peers, as well as information sharing and collaboration

**Organizational redundancy:** established a structure that provides back-up support for administrators

**Knowledge expansion:** research administrators are now expected to develop expertise in the full life cycle of a grant

**Reporting structure:** established consistency and clarity

**Operational efficiency:** standardization, resulting in knowledge more readily shared as well as streamlining

**Compliance:** all of the above increase compliance levels

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**Office for Sponsored Research Implementation**

The Office for Sponsored Research is a stakeholder in strong department and school-level research administration. Why? Because strong department and school-level research administration result in higher-quality, higher-efficiency transactions reaching the central office. These transactions are also more compliant and less resource-intensive. To encourage—and maximize—the success of the recent
job family-related changes in the College, the Office for Sponsored Research (OSR) developed a pilot program with the College and the Life Sciences business office focusing on training and workflow. The pilot program provided the opportunity for all three units to formally discuss specific areas of research administration, and exchange feedback on organizational improvements. The session topics were: Roles and Responsibilities, Proposal Development and Submission, Progress Report Development and Submission, Award Setup and Management, Subcontracts and, lastly, Cost Sharing. The pilot program is currently prompting OSR to develop more training materials (such as checklists) specifically written for department and school administrators. The pilot program also provides an opportunity for OSR to make some changes to workflow on a limited, trial basis, with the aim of broader rollout over time. These changes, such as streamlining proposal review and subcontract issuance, as well as transitioning dated paper-based forms to user-friendly electronic formats, are meant to complement the new research administration roles developed by the job family.

The alignment of units undertaking research administration at different levels of an organization is critical. A research administration job family provides a platform for that alignment, and is the cornerstone of efficient, compliant and collaborative operations in institutions conducting sponsored research. A Research Administration Job Family also offers career development opportunities for staff, providing an essential structure within which extremely valuable skills may be fostered.

About the Authors

Elizabeth Adams, Executive Director of the Office for Sponsored Research-Evanston at Northwestern University, has been in research administration for 13 years, at both Northwestern and The University of Chicago. She has worked at the program, center, department, school and central levels of university management. Elizabeth presented at both the 2012 and 2011 National Council of University Research Administrators (NCURA) Region IV conferences. She has degrees in English and Psychology from Emory University.

Annette Czech, Compensation Consultant, returned to her alma mater in 2009 having graduated with a bachelor’s degree in economics from Northwestern University. Hired specifically to coordinate and manage the development of job families for the University, she brings with her over 20 years’ experience in the field of human resources specializing in compensation and human resource information systems.

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\subsection*{320.5 \textbf{Shared Services: A Journey of Change and Reinvention}:} Randi Wasik, University of Washington

“The Computer Says I Need to Upgrade my Brain to be Compatible with its New Software.”

While we may find the above comment humorous, it is also very true. In a world that is moving with ever increasing speed, we are being asked to do more and more every day with less and less resources – both in terms of equipment and personnel. Bear with me for a bit of a history lesson to drive home this point. The Industrial Revolution encompassed the period of roughly 1760 – 1840, a mere 173 years ago. The computer revolution started with the creation of Leprechaun by Bell Labs in 1947, a mere 66 years ago. Steve Jobs founded Apple in a garage and incorporated it on January 3, 1977, a mere 36 years ago. Microsoft was founded on April 4, 1975, a mere 38 years ago. In 1982 the Internet protocol suite (TCP/IP) was standardized and the flood gates opened, a mere 31 years ago. Stop and think of the impact this less-than-200-year-old transition has had on our world.

As our world changes, we have to safeguard and monitor increasingly granular levels of the research world we support; we have to think smarter, not work harder. We have to embrace the change that is demanded of us while growing not only our individual skill sets, but also mentoring and growing the staff around us. We face a myriad of compliance risks right and left which, if not recognized and adhered to, can leave us vulnerable to audit findings and subsequent costs that are substantial to our institutions, not only in terms of reputation, but also financially.

With this in mind, we at the University of Washington (UW) are embracing the concept of a shared service environment. Institutions can run the gamut from decentralized administrative functions, to centralized, very controlled and regulated functions, to a mix of some decentralized and some centralized functions. UW has components of all three of these administrative functions.

At the UW I am involved with a project at the School of Medicine (SOM) which is one of two projects currently underway (the other project is on our “upper” campus or the Liberal Arts Schools). We have the luxury to build upon the upper campus model as well as a much smaller initiative which is similar in nature and in use by two of our fellow SOM departments. At the UW we are not trying to develop one central shared services organization for the entire campus, but rather will maintain a model for our upper campus and a model for the SOM as the needs and work flow are very different between the two entities. This makes our journey somewhat unique among higher educational organizations.

By moving to a shared services model we hope to unify separate departments (organizations) by linking them through an oversight model. We will establish service level agreements to define the services provided by the Shared Services Team (SST) which will have a focus on customer-driven transactions. In creating the SST,

\begin{flushright}
\footnotesize
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\end{flushright}
our goal is to create a performance-driven culture through measurement and feedback. A highly trained and technically competent team that can provide support at a level and consistency that an individual department cannot will ensure better compliance and end product.

The University of Michigan Administrative Services Transformation project created a table defining the advantages of moving to a shared service model which best describes what we are trying to create http://ast.umich.edu/. It is described below.

**Figure 320.5-1.**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Traditional View of Centralization</th>
<th>Shared Services View</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customers Treated As....</td>
<td>End Users</td>
<td>Customers (e.g., departments)</td>
</tr>
<tr>
<td>Leadership</td>
<td>Central Oversight Entity/Headquarters</td>
<td>Independent Unit – Customer Board/Advisory Group</td>
</tr>
<tr>
<td>Location</td>
<td>Capital Area/Headquarters</td>
<td>High Skill/Low Cost Area</td>
</tr>
<tr>
<td>Primary Focus</td>
<td>Cost Control</td>
<td>Service Excellence, High Performance, Cost Control, Continuous Improvement</td>
</tr>
<tr>
<td>Service Responsibility</td>
<td>Central Oversight Entity</td>
<td>Shared between SST and customers as stated in Service Level Agreements</td>
</tr>
<tr>
<td>Service Management</td>
<td>Optional</td>
<td>Service Level Agreements, Key Performance Indicators, Performance Reporting</td>
</tr>
<tr>
<td>Customer Contact Mgt.</td>
<td>Ad Hoc</td>
<td>Multiple channels (e.g., voice, e-mail, web); Contact center staffed with customer service reps; Case/Time Tracking Software; Client Relations Managers</td>
</tr>
</tbody>
</table>

There is much to be gained by adopting a shared service model. The benefits can span the following:

1. **Economic:**
   a. Higher productivity
   b. Reduced expenses
   c. Reduced infrastructure costs
   d. Leverage of investments in systems, equipment, and IT development

2. **Strategic**
   a. Support meeting increased demand with fewer employees who are highly trained and specialized
   b. Consistent support of key functions at the institution such as payroll, purchasing, grant preparation, visa preparation, etc.
   c. Achieve process and systems standardization – we all speak the same language
   d. Enable the larger group to move and react at a quicker pace to changes demanded of us in the various functions this team would support

3. **Quality**
a. Improved information for decision making  
b. Better and more consistent service to key stakeholders – the departments, staff, faculty, etc.  
c. Reduced error rates – quality at source – better end product  
d. Develop centers of expertise and innovation  

4. Speed  

a. Reduced cycle times for authorizations, procurement, sourcing, document preparation, submission, etc.  
b. Shorter response time to changes in requirements, rules, etc.  
c. By having a highly trained, centralized staff, they can create an end product with a shorter turnaround  

These teams will allow the departmental level the ability – freedom – for us and our staff to work to the level of our jobs. It is traditionally viewed that at best we only work to 65% of our job – i.e., there are a lot of workplace “detractors” that cause us to “underperform.” Many of us have or know of staff members that are capable of much more but are held back by routines and protocols that do not necessarily breed success and growth. By taking the more routine aspects of our activities and centralizing them where these activities can have the attention required by a highly trained and focused staff, we and our departmental staff can focus on tasks that traditionally take a back seat, but are equally as important. Additionally, when considering compliance risks, these tasks may be even more important. In short, we will be able to work smarter, ensuring compliance and the ability to partner with our leadership to think and work strategically. It will provide us with the ability to mentor our staff up (promote them to the next level) by “freeing” them to think strategically about what they do.  

While recognizing the need for change and deciding on choosing a shared service model, we are also quickly recognizing the need for communication and change management, emphasizing that this has the potential to be a win for everyone in the system touched by the service areas we have selected. From a central level and at our School of Medicine level, the University is partnering with us on this journey. We are being armed with training and tools to help ensure success in this transition. We have just completed a professional development journey on how to manage organizational shifts, with the final presentation on the Immunity to Change by Wendy Fraiser, Ph.D. What has become apparent, especially in this last session, is that as we embrace change, we must first look to ourselves as individuals and identify what “drives” us. Then we can move to the level of how the group/team/organization is moved and driven and thereby will react to change. In Dr. Fraiser’s presentation, it was also pointed out that in looking at change we should remember the following:  

One study cited 6 out of 7 heart patients could not sustain any change in their behaviors (eating habits, exercise, stress) even though they were told by doctors they would die without these changes. WOW! What this says is that even if we know a process, procedure, or protocol is not productive, not compliant, not teaming or forward thinking and we know of a better way, we tend to keep on the same course as it is familiar, comfortable, and makes us feel “safe.”
We know we need to change and quickly because the status quo is no longer
good enough. Therefore, we have identified four areas to which we want to apply
the SST model – Visa, Pre-award, Purchasing, and Payroll. Visa and Pre-award will
be first, followed by Purchasing and Payroll a year later. At the UW SOM and up-
per campus, we are capitalizing on our talented departmental and central staff by
forming small groups of volunteers to build and launch the project. We have a core
leadership group with a diverse membership, and then sub groups looking into IT
and the various services we wish to develop.

We have formed teams comprised of ten different departments and staff from
different levels as well as staff from the central offices that would be impacted by
this change. We have tapped these volunteers as they have expert skill sets in the
areas we wish to move to a SST. The teams will define and create the SST based on
evaluating different models at other peer institutions. We are examining all aspects
of the process map and tools, systems, and staffing to make the SST a success. We
have discovered we also need an IT team for the tools and systems development
as this is key to the success of the SST model. I want to highlight that what we are
creating is somewhat unique as it is anticipated the Pre-award SST will have direct
faculty contact, a concept not commonly used at other institutions.

The mantra on this journey is that the staff – using their skills, listening, team-
ing and empowering them to take ownership of their position so that our custom-
ers are served well – uses and grows your human capital. The staff is our best and
sometimes most undervalued resource, so we are striving to empower them on this
journey of change. As the SST takes root, the departments participating will be sup-
ported in empowering the staff to move to the next level of performance and sup-
port of the department.

I do not have many answers as we have just begun this journey, but I can say
that we are being thoughtful and careful and that in the end we will all benefit and
grow as a result. We recognize that teaming and communication are key and cor-
nerstones to the success of this change. We are actively challenging ourselves and
thereby challenging the system. The status quo is not acceptable – we have to capi-
talize on our human capital, grow the staff, and move everyone toward being able
to work at 100% of their ability.

About the Author

Randi Wasik is the Director of Administration and Finance at the University of
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mitties in the School of Medicine, creating a shared service model for the School of
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Maximizing Your Organizational Structure and Business Procedures

Tim Patterson and Rob Rubens, Huron Consulting Group

If yours is like most other institutions, your research administration office feels the growing pressures of the current environment: flat federal research funding since 2004, greater complexity of federal regulations, ever-increasing federal reporting and transparency requirements (including ARRA, FFATA, DATA, etc.), annual audits, federal investigations, a highly diverse funding portfolio with more intricate funding mechanisms, and high demand for excellent customer support.

On top of that, you likely face difficult decisions on how to address these issues while balancing internal challenges such as operating budget reductions, a push for improved processes on a tightened spending plan, staff turnover, an ongoing need for training and education, and meeting service level expectations, all while keeping day-to-day production levels steady.

No problem, right?

So this would seem to be a particularly tough time to transform the operations of your research administration office. However, if your institution wants to get maximum productivity from that office, now is precisely the time to be measuring output against goals and thinking of how to improve those numbers.

The prospect of change, especially in the face of the many pressures of research operations, may seem overwhelming. But when broken down into stages, it is less intimidating. The following is a four stage approach to face and conquer the overhaul of a research administration operation:

1. Vision and Planning: Conduct a visioning exercise that considers the core aspects of the research administration infrastructure and supporting processes and defines performance targets and goals. Who do we want to be? Are we meeting those goals?

2. Discovery: Perform an in-depth assessment of the current infrastructure against your vision and identify opportunities for improvement.

3. Design: Create a roadmap for transformative change.

4. Implementation and Operational Support: Provide oversight and operational support throughout the implementation and after deployment to ensure the sustainability of project goals and results.

Vision and Planning

The initial steps in any organizational assessment or process redesign – determining if there is a need and deciding where to start – are often the most challenging. So, where do you start and how do you know it’s time to take action? Negative customer feedback, comments from process owners about increased workload or process-
ing time, staff turnover, pending system implementations, and audit findings or concerns can serve as drivers to start a review.

Time should be another factor for consideration. If an organizational review has not been conducted in the last 3 to 5 years, it’s time to do one, especially with the ever changing landscape of research administration. Over time, certain processes can become overly manual, time consuming, or redundant with other procedures. If business procedures are undocumented, consistency from one staff member to another grows to become an issue, particularly if there has been turnover.

Put pen to paper and create a vision for your office. Even though you may modify this slightly as you go, you should establish upfront where you hope to take your organization. Focus on your office’s mission statement and ask: where do we want to be 6, 12, 24, 48 months from now? This is not the place to write your business goals; those are the outcome of pursuing your vision and holding your organization accountable for its values. Here is where you draft four or five guiding principles that describe why, how, and what your research organization performs. Empower others who are part of this transformative process to assist in drafting the vision. When drafting: be specific; be actionable. Then, begin asking the more finite questions to get started:

- What are the core responsibilities of your office? What is your office’s mission statement? Are you following it?
- Have you established performance goals, and are you managing to them?
- Who are you serving? Are you meeting their needs? How long does it take for work to flow through your office?
- How many different sets of hands are involved with each process? Whose hands are they?

Once leadership has identified the need to take action, consensus should be obtained from key stakeholders and individuals charged with change management. Buy-in is critical. Not having a thoroughly vetted and agreed-upon plan can create or exacerbate a number of future roadblocks, including scope creep, time mismanagement, unclear goals, unrealistic expenditures, poor resource utilization, increased backlog, etc.

Proactive project planning and management is paramount to successful execution of any operational review. A documented project plan should list key tasks, establish milestone dates for completion, and assign individuals or groups as responsible for completing each task. Project plans should also be flexible enough to allow tasks or steps to be added as part of the discovery step (highlighted below) and realistic enough to allow for the completion of day to day tasks. Don’t forget, your regular business doesn’t stop, slow down, or pause to allow time for this review to take place. Your office still needs to find a way to get the work done; hence, managing expectations around the amount of time required to complete the review is important. Also, make sure to account for items that might impact the work plan, such as month-end close, year-end close, holidays or vacation time, infrequent but
relevant steering committee meetings, and certain sponsor driven deadlines.

**Discovery**

The second stage involves assessing the current infrastructure, including performing an in-depth evaluation of the workload, creating a task inventory of the items your office is responsible for completing, identifying possible processes that would benefit from an improvement in workflow or automation, and noting unnecessary or institutionally over-regulated or overly complicated practices.

If you sense that it takes too long to complete a certain task or to review, approve, and process a particular document, it probably does. How do you test that? Internal tracking metrics, detailed process mapping — which will highlight areas of inefficiency or redundancy — and survey responses from campus customers will validate or disprove that concern.

Who performs this discovery step? A workgroup should be established with mixed representation of process owners, key stakeholders, and other change management personnel to research and collect data. This group should meet with primary customers, as appropriate, to better understand concerns, to isolate pain points, and to identify opportunities for improvement.

Before anyone takes a deep dive into data mining or analysis, carefully review the inventory of areas targeted for review. Establish what the group would like to better understand regarding your organization’s role in each of these areas, and prioritize the work plan accordingly.

Be careful to avoid the trap of “paralysis by analysis.” Try not to take on so much at one time that the workgroup loses sight of its goals. Operational improvement takes place over time and tends to be cyclical with recurring evaluations. It’s not something that will be completed in a week.

Many institutions do not have accurate or current metrics available to evaluate operational or personnel efficiency. These numbers should, however, be one of your outcomes from this initial assessment. You want to have answers to questions like:

- **Are we meeting service level expectations?** Moreover, have we taken time to establish service level expectations that we can then manage to?
- **Does the staff have the support they need to do their jobs?** This includes clear process documentation, tools and templates, systems, training, etc.
- **What type of workloads do individuals at similarly-sized institutions process?**

By gathering an inclusive and representative data set for work completed over a period, for example the past twelve months, you can begin to evaluate your organization’s efficiencies – and sometimes lack thereof.

**Design**

This stage requires answering questions such as: What did the workgroup discover as part of its review? What opportunities for change would you rank as being the highest priority, easiest to implement, or have the greatest return on investment? What are the obstacles that will prevent you from being successful?
Once the workgroup has an inventory of the opportunities available for change, begin brainstorming potential solutions and meet with your key customers, as appropriate, to further discuss the impact and benefit of the suggested enhancements and changes. These might include revised workflow, streamlined approvals, opportunities for automation, or even reassignment of duties or tasks.

Next, narrow your immediate focus to one solution or change, and obtain consensus from key decision makers on the proposed approach. Assuming there is support and buy-in for the suggested changes, identify a desired implementation date. Think about the steps that will have to be completed prior to that date. Are there tools, process maps, checklists, etc. that need to be created or modified? Are there training implications for the staff and/or the campus community? If so, how will you roll out the training? Who will conduct it? Who will attend? Obviously, training needs to be completed in advance of the implementation date, and time must be allotted for it.

Who else might be impacted? A communication plan should be drafted to notify other affected individuals of the pending change, implementation date, anticipated benefits, and any process modifications involving them. Other impacts to consider in your communication plan may include shifts in workload, reassigning staff to different areas, and redefining roles and responsibilities for the unit.

As you complete plans for your first solution or change, start to build long term plans for subsequent changes, and begin the process over again: think through the impacts and steps necessary for success.

**Implementation and Operational Support**

Implementation of change is not easy, but should not be feared. An implementation is likely to be successful if it is thoughtfully planned with open communication, transparency, and support. Employees will require training, ongoing support, and perhaps most important, time to adjust. In the short term (a.k.a. the stabilization period), productivity may suffer, but gains in operating efficiencies, quicker turn-around times, and increased customer support will make up for it in the long term.

How do you survive those first few weeks or months? There may not be much of an impact. To the extent that there is, institutions may consider allowing overtime hours for select staff members or hiring temporary assistance to augment existing staff to guard against productivity letdowns and allow for this stabilization and adjustment period to pass. Additional training or retraining may also be needed to ensure staff members are performing tasks as outlined.

Make sure to establish a series of milestone dates to track progress against newly established goals. Plan to communicate the progress to key stakeholders and impacted customers, and make sure to take time to celebrate the accomplishments with the process owners. This will make future changes smoother and more welcoming for the staff to handle.

**Conclusion**

Transforming an organization and effecting organizational change are not simple
tasks. However, thoughtfully moving through each of the above four stages with adaptation to one’s unique institutional settings will achieve the goals you set out to accomplish. Remember to adjust your plan as you go; each setting is different and typically involves a myriad of moving parts, which will not be the same throughout the course of the project.

Transparency, communication, “staying the course,” and celebrating wins are a few of the most important factors to ensure success and build or restore rapport along the road for organizational change. Are you ready for it? Good luck!!

About the Authors

Tim Patterson is a Senior Director in the Higher Education and Life Sciences practice at Huron Consulting Group. Tim has close to 18 years of experience working in areas such as university operations and research administration with an emphasis on grant and contact administration, compliance with cost accounting standards, operational improvement, training development, and audit resolution. He has presented at a number of regional and national NCURA conferences. Tim can be reached at tpatterson@huronconsultinggroup.com

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The Advantages of Using Fringe Benefit Rates

Jim Carter and Kari Kelly, Huron Consulting Group

Introduction

Institutions have a choice of directly charging benefits by specific identification by individual or using a fringe benefit rate to charge grants and contracts for these costs – who knew? Applying and tracking fringe benefit costs on an individual basis can be one of the more frustrating and maddening activities a research administrator must deal with in budgeting and charging benefits accurately to projects.

Because the tracking of benefits for each individual employee is complicated, more institutions are establishing a fringe benefit rate system to better manage the process. While such rates have great potential for simplifying fringe rate application, reducing errors, and potentially increasing cost recovery, they are actually not suitable for all institutions.

Eastern Kentucky University (EKU), as an example, recently implemented fringe benefit rates on its campus with assistance from the Huron Consulting Group. At EKU, the primary goal was to develop a more efficient methodology for the budgeting and charging of fringe benefits across campus. EKU had other requirements including the ability to create an annual budget using fringe benefit rates and eliminate the detailed processes required by charging benefits on an individual basis.

“EKU’s implementation of fringe benefit rates has helped us solve significant budgeting issues and allowed us to manage our grants more efficiently.”

– Brad Compton, Executive Director, University Accounting & Financial Services, EKU

The implementation of fringe benefit rates at EKU resulted in a decrease in administrative burden for the campus and the simplification of accounting for fringe benefits. However, no two institutions are the same. What questions does a university need to answer in deciding which type of method to use? First, let’s answer some of the basics.

What is the Difference between Direct Charging and Fringe Benefit Rates?

Fringe benefits are employee related costs typically including: pension plans, contributions to health and life insurance, employment taxes, and workman’s compensation. Institutions have two choices that can be used to apply fringe benefits to funding sources, including sponsored projects. The direct charging method allocates each individual’s specific benefits to each salary source while fringe benefit rates use an average rate (normally a percentage of salary) for groups of employees. The example below shows how benefits are charged under each method. Under the direct charge there would be 6 entries, one for each benefit, whereas the fringe benefit rate requires a single line.

The direct charge methodology for fringe benefits is often used by institutions. This method charges each employee’s specific benefit costs to the appropriate fund-

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1This article is reprinted from NCUURA Magazine, Volume XVLI, October/November 2014, No. 5. It is used with permission of the publisher.
ing source. All benefit costs are tied to an individual and are budgeted using each individual’s benefit package. This results in continual fluctuation of fringe benefit costs by employee. One employee may have individual health insurance versus another employee with family coverage, for example.

When using the direct charge methodology, many institutions do not always charge restricted funds their share of benefit costs. This is because the tracking, budgeting and charging of these costs can be intrusive and complicated. Instead, many institutions choose to manage and pay these costs centrally.

When using the second methodology, a fringe benefit rate, the pooled benefit costs are divided by the total salaries in an assigned employee group. This results in a single rate for each employee group. These rates are then applied to the applicable employee salary to represent the associated benefits for that type of employee. The key components of a fringe benefit rate calculation are the fringe benefit costs, the salaries, and the defined rate structure (employee groups).

**How do you Calculate a Fringe Benefit Rate?**

The fringe benefit rate is an average cost of benefits for all employees within the defined employee group. The same benefits included under the direct charge methodology are included in the fringe benefit rate methodology. Also, one advantage to using a fringe benefit rate is the ability to include additional fringe benefits costs in the rate structure. Terminal leave, paid leave, graduate student insurance, sabbaticals, tuition remission, and other institutional specific benefit costs are often included in the rate structure. This allows the institution to allocate a fair share of these costs to all funding sources. It is important to analyze all employee benefit costs to determine whether they can be included in the rates.

An institution also needs to consider the types of salaries that should be included in the rate structure. In addition to employees’ regular salaries, the following costs should be considered when developing rates: perquisites, bonuses, student salaries, and salary caps.

The defined rate structure, often referred to as “employee groups,” can vary drastically across institutions. What works at one Institution may not work at others. Institutions may choose to calculate a single fringe rate or develop more than 10 rates. An institution should develop a rate structure that will group fringe benefit costs and align employees with the benefit costs they receive. If an institution chooses to develop multiple rates, then it defines an employee group for each rate. Each employee group will have an individual rate calculated and applied. Common criteria used to develop employee groups are employee type, staff categories, salary bands, and benefits received.

Before switching from direct charging to fringe benefit rates, the institution should fully understand the financial and budgeting impacts on the use of fringe rates across the campus. To determine the funding impacts, a comparative analysis should be completed to compare the differences by funding sources, departments, and other criteria. Completing this analysis will highlight the impact of benefits that were not being equitably charged and the funding sources that are paying for the
benefits. The impacts to key stakeholders and the communication and transition plan should also be discussed by all decision makers.

**Advantages of Fringe Benefit Rates**

There are numerous reasons why large and small institutions are switching to fringe benefit rates. Some of the key reasons are described below.

1. *Increased Efficiency*

A fringe benefit rate will pool fringe benefit costs and distribute costs to the benefitting departments and sponsored projects. This will result in one charge for fringe benefits instead of multiple charges for individual benefits (FICA, retirement, health, etc.). The use of a fringe benefit will allow for easier recordkeeping and less maintenance of benefits and costs of programs for employees. A fringe benefit rate will simplify the following processes: the monitoring of fringe benefit charges to departments, grants, and contracts; billing for grants and contracts; and salary transfers. A fringe benefit rate will provide consistency in how benefits are negotiated and paid and significantly minimize the labor distribution programming. The number of transactions required for an individual employee will significantly decrease.

The table below demonstrates how many accounting transaction would be eliminated for an institution with 1,000 employees that each have 6 benefit categories.

**Figure 320.7-1**

<table>
<thead>
<tr>
<th>Category</th>
<th>Direct Charging</th>
<th>Fringe Benefit</th>
<th>Reduction in Transactions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employees</td>
<td>1,000</td>
<td>1,000</td>
<td>0</td>
</tr>
<tr>
<td>Funding Sources</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Salary Transactions per Month</td>
<td>2,000</td>
<td>2,000</td>
<td>0</td>
</tr>
<tr>
<td>Fringe Transactions per Month</td>
<td>12,000</td>
<td>2,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Annual Fringe Transactions</td>
<td>144,000</td>
<td>24,000</td>
<td>120,000</td>
</tr>
</tbody>
</table>

2. *Increased Recovery*

A fringe benefit rate will allow an institution to recover additional costs. Often times, restricted funding sources are not currently charged the full proportion of benefit costs. Some fringe benefits are paid centrally within the institution from unrestricted funds. Fringe benefits that are funded by central administration are only partially recovered through the Facilities and Administrative (F&A) indirect cost rates. Fringe benefit rates will allow an institution to further increase recovery by directly charging full fringe benefit rates to sponsored awards and auxiliary operations. Sponsored awards will be charged their “full” fair share of actual fringe benefit costs, increasing the recovery of fringe benefit costs.

3. *Reduced Risk of Non-Compliance*

Fringe benefit rates are negotiated annually with the institution’s cognizant federal agency (Department of Health and Human Services Cost Allocation Services or the Department of Defense Office of Naval Research). An institution will need to inform
their cognizant agency of the change in methodology. The fringe benefit rate structure is required to be recalculated and negotiated on an annual basis. This decreases the opportunities for charging unallowable/unallocable fringe benefits. In addition, the fringe rates are adjusted annually for any overage/shortage that an institution may incur from prior base year benefit costs.

4. Easier Budgeting
A fringe benefit rate can be used to budget sponsored projects and departmental expenditures. A fringe benefit rate will result in consistency between budgeting and expense practices. The same fringe benefit rate will be used for both budgeting and charging purposes, which will improve the budgeting process for all the institution’s funds and standardize benefit costs across employee groups. A fringe benefit rate will also simplify budget negotiations with sponsors.

Reasons to Continue Using a Direct Charge Methodology
There are several practical reasons why a direct charge methodology is still a viable option. Switching to fringe benefit rates requires an affirmative action by an institution, and this may not be feasible because of budgeting rules. This is also a change that requires support campus-wide to be successful. Fringe benefit rates require predictability to avoid large rate swings on a year-to-year basis, and that information may not be available prior to rates being submitted. Many state-funded institutions receive direct funding for fringe benefits and spreading those benefits using fringe benefit rates may not be allowed under the state funding rules.

Conclusion
There are many advantages to implementing a fringe benefit rate structure. A fringe benefit rate will provide consistent accumulation and allocation for fringe benefit expenses to all functional activities. In addition, the rate structure will simplify the accounting for fringe benefit expenses and reduce the risk of noncompliance. Importantly, the rate structure will decrease the administrative burden to budget and manage sponsored awards and decrease the risk of under-recovering funds.

About the Authors
Jim Carter is a Managing Director at Huron Consulting Group. His experience includes working directly in universities and academic medical centers as well as serving in consultative roles. Jim specializes in partnering with institutions on the preparation and negotiation of F&A rates and fringe benefit rates in addition to strategically addressing financial and regulatory issues. Jim can be reached at jcarter@huronconsultinggroup.com

Kari Kelly is a Manager in Huron Consulting Group’s Education & Life Sciences practice, focusing on preparing and negotiating F&A rate calculations, structuring fringe benefit rates, and improving service center operations. Kari can be reached at kkelly@huronconsultinggroup.com.
320.8 Considering and Effectively Working within Separate or Combined Pre- and Post-award Organizational Structures

Twila Fisher Reighley, Michigan State University

A common debate in research administration focuses on whether traditional pre- and post-award functions should be combined in one organizational unit or separated into two or possibly more offices. The debate is conceptually interesting and is a natural option to consider when functional improvements are needed. Organizational restructuring is not the only alternative, but whether the decision is to restructure or not, there is often an expectation for improved prioritization of tasks, filtering of work, and client satisfaction.

Research Administration/Sponsored Program Offices (SPO’s) have evolved based on institutional values, cultures, resources, structures, and functions in response to external factors, especially sponsor requirements. Pre-award offices often developed out of a desire to support faculty in increasing award dollars for graduate research and many times were associated with the academic side of the university infrastructure, frequently the graduate college, because of research’s integral role in graduate education. Post-award offices primarily developed out of the need to be accountable to sponsors and receive payment for expenditures incurred, which are functions closely aligned with the financial side of the institution.

Separating and integrating pre- and post-award. With the increased volume and complexity in federal and other sponsor requirements, we are seeing more segregation and specialization of duties, particularly at large institutions. Specialization is easier to manage when pre- and post-award functions are in separate offices, which contributes to the continued recurrence of the separated model. Specialization comes with pros and cons. For example, by assigning one group of people to focus on awards, we see benefit because the group will not be regularly pulled away by proposal activity with immediate proposal deadlines. The downside of re-assigning personnel is coping with the huge cyclical peaks in proposal deadlines from the remaining staff. When specialized units or groups handle facets of research administration, it is important to allocate time for coordination of efforts, which can include developing consistent approaches and figuring out who is responsible for identifying and implementing requirements of a new regulation.

I wouldn’t be surprised to hear that many reading this article have experienced more than one organizational model. In addition to the increased complexity and size of the research enterprise, the last decade of budget constraints also created an impetus for continued organizational model evolution. My experience includes seven structure variations. Although a wide spectrum of organizational structures exist, they primarily coalesce around the models described in Figure 320.8-1.

Pros and cons. Being aware of the advantages and disadvantages of various organizational models will help an institution play to its strengths and develop

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1 This article is reprinted from NCURA Magazine, Vol XLVIII No 4, August 2016. It is used with permission of the publisher.
mitigating strategies and controls. In practical terms, one of the advantages of a model in which one person handles everything in the life cycle related to a particular project is that a faculty member or project administrator contacts one person and ideally that one person provides the solution every time. This is more common, as you might expect, for practical reasons at smaller institutions, which are more likely to have one person or office handle a wide variety of duties. In larger institutions, consistency between projects may suffer and backup coverage during times of absence can be difficult. It also means that certain items tend to take precedence over other items, which can result in negative impacts to covering the whole gamut of work assigned to the office.

**Figure 320.8-1. Typical Organizational Models**

<table>
<thead>
<tr>
<th>Separate pre- and post-award models</th>
<th>Combined pre- and post-award models</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-award offices report to one Vice President (VP)</td>
<td>Typical variations:</td>
</tr>
<tr>
<td>* • Common reporting is to a VP or Asst. VP for Research, a Graduate College Dean, or Provost.</td>
<td></td>
</tr>
<tr>
<td>* • May see dotted line reporting to a second VP.</td>
<td></td>
</tr>
<tr>
<td>* • Post-award offices report under a second Vice President (VP)</td>
<td></td>
</tr>
<tr>
<td>* • Common reporting is to a VP or Asst. VP for Finance or Controller.</td>
<td></td>
</tr>
<tr>
<td>* • May see dotted line reporting to a second VP.</td>
<td></td>
</tr>
<tr>
<td>Pre- and post-award functions are combined under one Vice President (or Vice Chancellor) in one office, though different people may focus on pre-award functions and post-award functions.</td>
<td></td>
</tr>
<tr>
<td>Pre- and post-award functions are combined into one office and one person handles each project from proposal development through award to completion. With this variation, functions that benefit multiple projects are likely pulled out separately, e.g., letter of credit draws on multiple projects.</td>
<td></td>
</tr>
<tr>
<td>Reporting may vary:</td>
<td></td>
</tr>
<tr>
<td>* • Common reporting for the combined model is:</td>
<td></td>
</tr>
<tr>
<td>* • VP or Asst. VP for Finance or</td>
<td></td>
</tr>
<tr>
<td>* • VP or Asst. VP for Research</td>
<td></td>
</tr>
<tr>
<td>* • May see dotted line reporting to a second VP or reporting through a Provost or Chancellor.</td>
<td></td>
</tr>
<tr>
<td>* • Less common, but sometimes sponsored programs offices will have dual reporting to two VPs.</td>
<td></td>
</tr>
</tbody>
</table>

**Variations.** A variation on the one person “does it all” is that a combined team “does it all.” My personal favorite is a structure that allows the amount of specialization appropriate for the organization’s size, but provides integration accountability at an operational or oversight level by a person whose primary focus is supporting pre- and post-award, i.e., normally below the VP level. Early in my career, I prepared the operational budget request for the SPO of a combined operation and I remember the office director being grilled as two bosses (VP for Finance and Provost) took turns asking the “harder” question. (The director of course did a great job!) I recall thinking: No way would I want to report to two VPs. Fast forward a few decades and I see benefits to the current organization structure in which I work having oversight
of two offices, one managing pre-award and the other post-award administration, and reporting to two VPs (Finance and Research). The joint reporting to two VPs supports the link to faculty and development while providing access to systems and promoting accountability. While I will acknowledge a bias, I’ll also note that having oversight for both offices helps keep people talking and supports integration.

**Factors to consider.** Some ways of structuring, work better than others, but a variety of ways can be effective. Please see Figure 320.8-2 for a summary of some advantages and disadvantages of two typical organizational structures. When looking at the advantages and disadvantages and determining structure, the following organizational or award attributes merit consideration:

**Figure 320.8-2. Considering Separate Combined Organizational Models**

<table>
<thead>
<tr>
<th></th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Separate</td>
<td>• Allows more depth and focus on either area.</td>
<td>• Increased time needed for understanding specific projects and increased coordination between areas.</td>
</tr>
<tr>
<td></td>
<td>• Improves ability to allocate resources and prioritize at a management level instead of the rush proposal and other emergencies always taking precedence.</td>
<td>• Challenges in communicating because of the differing experiences and priorities of the two areas.</td>
</tr>
<tr>
<td></td>
<td>• Manageable staff size may contribute to cohesiveness.</td>
<td>• Multiple points of contact and expertise for administration depending on where something is in the award cycle and the issue involved.</td>
</tr>
<tr>
<td></td>
<td>• Pre-award: when reporting to a Provost or VP for research, the leader is normally aligned with the academic community; the primary emphasis is supporting principal investigators and the research mission.</td>
<td>• Possible lack of understanding as to who is responsible, with duplication in effort in some areas and other areas in which items are not being adequately addressed.</td>
</tr>
<tr>
<td></td>
<td>• Post-award: more likely to have a strong operational leader and integration with other campus systems; the emphasis is normally on managing financial and regulatory compliance.</td>
<td>• Focus and prioritization challenges</td>
</tr>
<tr>
<td>Combined</td>
<td>• Increased integration, communication, and consistency in management of an award.</td>
<td>• Staff size (particularly for large institutions) may contribute to a lack of cohesiveness.</td>
</tr>
<tr>
<td></td>
<td>• Less duplication of effort.</td>
<td>• May not find a leader with expertise in all areas.</td>
</tr>
<tr>
<td></td>
<td>• Client convenience: one point of contact for all or many project life cycle stages.</td>
<td>• Depending on the priorities of the leader, the institution may see less client support or more compliance risk than with the segregated model.</td>
</tr>
<tr>
<td></td>
<td>• Dual emphasis on supporting: a) principal investigators and the research mission and b) accountability and compliance.</td>
<td>• Types and mix of awards: contracts vs. grants, size of awards, types of compliance issues</td>
</tr>
</tbody>
</table>

◆ **Volume of awards:** two offices and specialization makes more sense when dealing with large volumes as it allows more focus and development of expertise in the subject area.

◆ **Sponsors and variety of sponsors:** a portfolio of predominately NIH and foundation funding is different to administer than having a large breadth of sponsors.

◆ **Types and mix of awards:** contracts vs. grants, size of awards, types of compliance issues

◆ **Expertise and number of staff:** the larger the institution, the more likely the benefit from specialized units. Expanded responsibility in one unit is sometimes determined by who is available to serve when a new regulation or challenge is identified.

◆ **Information systems or lack of systems:** impact of computer/electronic systems becomes apparent when filtering criteria to sort and route transactions are limited.

**Working within current structure.** In addition to considering the advantages
and disadvantages of various models and the institutional attributes, it is also worth weighing the costs versus benefits of organizational restructuring. If the benefits don’t exceed the costs or if you’re not the one making the decision, there are additional ways to make improvements.

**Understand each other’s challenges.** It helps to remember when duties are separated that both pre- and post-award staff face pressure from being at the end of a cycle, i.e., 1) pre-award offices are often the last step in getting: a) a proposal submitted, which results in compressed timeframes to review and pressure to make hasty decisions, or b) an award executed allowing projects to start; and 2) post-award offices are downstream of pre-award decisions and sometimes those decisions can negatively impact post-award workload or capacity.

**Making it work.** No matter what organization model is used, *pre-award staff can influence successful implementation at a campus by:* understanding and caring about the post-award impacts of pre-award decisions; keeping costing knowledge current; and getting feedback and learning from post-award offices as to what works in the institution’s accounting/information system(s).

*Post-award staff can influence successful implementation by:* being flexible to the needs of the project and the sponsor; providing constructive feedback to pre-award staff; and understanding that creating proposals in short timeframes is challenging and not always conducive to perfection.

*Both areas can benefit by:* striving for transparency in approach; working through roles and responsibility; reviewing processes, coordinating efforts and collaborating, not competing for resources.

**In summary.** Organizational models, associated advantages and disadvantages, and organizational attributes have been reviewed above and in Tables 1 and 2. Thoughtful consideration of the organizational structure that effectively balances focus and integration in supporting clients, work completion, and the research mission can have positive impacts. Significant variances in organizational structure can work if the unit directors are committed to work within the roles established, have or develop the expertise to competently execute defined roles, and support each other in their defined roles. Considering non-structural changes such as education, policy, procedure and system changes, rather than organizational restructuring can minimize disruption and still yield improved outcomes. It isn’t always easy or clear cut, but finding ways to effectively improve our support for research and other scholarly work of faculty at our institutions is rewarding.

**About the Author**

**Twila Fisher Reighley,** MBA, Assistant Vice President for Research and Graduate Studies at Michigan State University has oversight responsibility for MSU centralized offices providing pre- and post-award administration and accounting. Her NCURA roles have included Chair of the NCURA Professional Development Committee and member of the NCURA Board of Directors. She can be reached at reighley@osp.msu.edu
This section includes tools — reports, flow charts, checklists, etc. — relating to organizational topics. These materials are culled from a variety of authoritative sources.

### Position Description Checklist: Senior Position in Sponsored Research Administration

The following is presented to help research administrators jumpstart efforts to create or better define a position description for a senior position in an office of sponsored research.

<table>
<thead>
<tr>
<th>[Senior Position], Office of Sponsored Research</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Duties and/or Responsibilities (choose as many as apply)</strong></td>
</tr>
<tr>
<td>• Directs and manages the Office of Sponsored Programs</td>
</tr>
<tr>
<td>• Responsible for all phases of grant administration</td>
</tr>
<tr>
<td>• Oversees pre- and post-award staff and programs</td>
</tr>
<tr>
<td>• Works closely with [Position title] to identify and circulate grant opportunities</td>
</tr>
<tr>
<td>• Promotes research opportunities, agenda, and achievements</td>
</tr>
<tr>
<td>• Works closely with [Position title] to oversee the preparation, review, and submission of all proposals to achieve a high quality</td>
</tr>
<tr>
<td>• Acts as a liaison between university and sponsors</td>
</tr>
<tr>
<td>• Provides training to faculty and staff on relevant policies, processes, and regulations</td>
</tr>
<tr>
<td>• Works in partnership with other administrators and senior faculty as needed</td>
</tr>
<tr>
<td>• Reports to the [Position title] and keeps him or her informed of developments, information, or situations needing attention</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Qualifications: Education (choose as many as apply)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Master’s or professional degree preferred.</td>
</tr>
<tr>
<td>• Combination of a B.A. or B.S. and extensive directly related experience can be substituted for higher level education</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Qualifications: General (choose as many as apply)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• ___ years of related experience with increasing management responsibilities</td>
</tr>
<tr>
<td>• ___ years of supervisory experience</td>
</tr>
<tr>
<td>• Ability to exercise sound judgment</td>
</tr>
<tr>
<td>• Good organizational skills</td>
</tr>
<tr>
<td>• Excellent communications/interpersonal skills to interact with internal and external persons; ability to work well in a diverse environment</td>
</tr>
<tr>
<td>• Service-oriented outlook</td>
</tr>
<tr>
<td>• Proven leadership skills</td>
</tr>
<tr>
<td>• Sound fiscal and time management skills; keen attention to detail and flexibility</td>
</tr>
<tr>
<td>• Ability to clearly and concisely express ideas and positions, both orally and in writing</td>
</tr>
<tr>
<td>• Ability to juggle multiple deadlines and meet them satisfactorily</td>
</tr>
</tbody>
</table>
Qualifications: Specific (choose as many as apply)
- Knowledge of university grants management policies and procedures
- Experience working with a wide variety of programs and funding agencies
- Ability to provide accurate advice and timely resolution to questions/problems
- Knowledge of policies and procedures in federal grants; familiarity with the nonfederal grant arena
- Computer proficiency, preferably knowledge of _______
- Extensive and demonstrated pre-award, proposal development, and grant writing experience
- Experience drafting and negotiating research and research-related agreements
- Understanding of policies and procedures related to research administration, including but not limited to accounting, purchasing, personnel, regulatory compliance, and financial management
- Working knowledge of the FAR, CFR, DUNS numbers, OMB Circulars, Grants.gov and intellectual property laws along with general knowledge of accounting principles and financial management
- Demonstrated ability to foster cooperative and mutually supportive relationships with faculty, administrators, staff, and others
- Demonstrated knowledge of proposal preparation strategies, including budgeting/budget development
- Experience analyzing and interpreting documents
¶390 Knowledge Check

AIS editors

The Q&As at ¶390.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 300 has been understood. Note: For the answer key for ¶390.1, see ¶390.3, which appears on a separate page (page 390:5) for testing purposes.

Discussion topics at ¶390.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶390.1 Q&As

1. As discussed in ¶305, research administrators often stratify risks into three categories, which include all of the following EXCEPT:
   (a) Transactional risk
   (b) Scientific misconduct risk
   (c) Institutional risk
   (a) Specific sponsor risk

2. Typically an OSP approves the official sponsored award documents (proposals, awards, reports, amendments, etc.) on behalf of the governing body of the institution through the process known as
   (a) Institutional commitment
   (b) Expanded authority
   (c) Delegated signing or signature authority
   (d) Cognizant authority

3. Although research administrators have several “constituencies,” perhaps the “first” such customer group is
   (a) Federal sponsors
   (b) Industry sponsors
   (c) Principal investigators
   (d) Institutional vice presidents and provosts

4. The pre-award function typically encompasses the following types of activities EXCEPT:
   (a) Assisting faculty in locating funding sources and submitting proposals for support of research and other faculty-driven activities
(b) Accepting awards and ensuring they are administered consistent with sponsor and institutional policies

(c) Mediating the award process with the sponsor to ensure university research policies are adhered to, and that other financial and programmatic terms and conditions are acceptable to the institution

(d) Monitoring spending against budget, noting certain trends such as overspending or underspending

5. The draw down of funds on federal awards typically is accomplished through

(a) Co-mingled bank accounts
(b) A letter-of-credit mechanism or system
(c) Cost sharing mechanisms
(d) Pre-authorized cost transfers

6. Often, the “success” of any one of the OSP organizational structures is most heavily influenced by

(a) Physical layout of the office or offices
(b) Efficient and proper tracking of award activity
(c) Length of time the institution has been involved in sponsored activity, especially federally sponsored activity
(d) The caliber and competencies of the individuals within an institution

7. At many institutions, responsibility for the day-to-day administrative management of the award generally rests with staff at the

(a) Department or local level
(b) Provost or vice presidential level
(c) Central administrative level
(d) Central operational level

8. The federal government only distinguishes between large and small research entities in two respects. Which of the following is one of these?

(a) Schools with less than $5 million in organized research base are exempt from certain award recordkeeping and reporting requirements.
(b) Schools with less than $5 million in organized research base are exempt from certain financial conflict of interest compliance requirements.
(c) Schools with less than $25 million in sponsored expenditures in a given year are not required to submit a disclosure statement to their cognizant agency.
(d) Schools with less than $30 million in sponsored expenditures in a given year are not required to submit a disclosure statement to their cognizant agency.
390.2 **Discussion Topics**

1. What is meant by the types of risks associated with sponsored research administration? How can the sponsored research administrator be assured that his or her team is paying attention to all kinds of risks associated with sponsored research activity and not focusing too much on any one type?

2. Why is research cooperation and collaboration between individuals, departments, and institutions becoming more common? What can the OSP do to smooth this collaboration? Does how your OSP is organized enhance or hinder cooperation and collaboration?

3. It’s hard to avoid some sort of office re-organization during one’s sponsored research administration career. What do you consider key factors in successfully undergoing an OSP reorganization?

4. Organizing workflow to ensure a balanced and equitable distribution of work in a staff member’s “portfolio” can be important. What does this mean at your institution and how is it accomplished? Has the substance of a staff member’s portfolio changed in light of recent budgetary concerns at your institution?

5. Discuss the concept of “cross-training” and how this plays out at your institution for the functions of the office of sponsored research? Could any changes/improvements be made in the program?

6. During times when money is not available for staff raises, promotions, and incentives, what kinds of nonmonetary benefits or compensation could you offer staff members?

7. How has the sponsored programs office workforce changed over the past decade? What will the workforce look like over the course of the next decade? Is your office prepared to accommodate these changes, and if so, how?

8. What advise would you give a staff member who is transitioning from a position in central research administration at your institution into a position in departmental administration? What if the reverse were true — the person is transitioning from a position in departmental administration to one in central administration — how would your advise be different?
1390.3 **Answer Key**

Following are the correct answers to the questions included at ¶390.1.

1. (b) Scientific misconduct risk
2. (c) Delegated signing or signature authority
3. (c) Principal investigators
4. (d) Monitoring spending against budget, noting certain trends such as overspending or underspending
5. (b) A letter-of-credit mechanism or system
6. (d) The caliber and competencies of the individuals within an institution
7. (a) Department or local level
8. (c) Schools with less than $25 million in sponsored expenditures in a given year are not required to submit a disclosure statement to their cognizant agency.
PLACE TAB

¶ 500

Communications
Chapter 500
Communications

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Kim Moreland, Associate Vice Chancellor for Research Administration and Director, Research and Sponsored Programs, University of Wisconsin, Madison, and Kennis Wessel, Ph.D.

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Introduction
Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter discusses ways research administrators can harness communication skills effectively for success both within and outside the institution.

Research administration encompasses a variety of skills, including, among others, cost accounting, interpretation of government regulations, the management of large quantities of data, and problem resolution. Kim Moreland of the University of Wisconsin, Madison and her colleague, Dr. Kennis Wessel, present a most compelling case for the fundamental importance of communication skills for everyone engaged in research administration, regardless of their specific duties and responsibilities. At the very beginning of their chapter, they come right to the point: “The tools of effective communication are essential to effective research administration.”

Moreland and Wessel provide a thorough overview of the essential principles of communication and an analysis of the principal media by which we communicate. If one were to take a close look at how most research administrators spend most of their days, one would find that they are engaged in communication. The particular variety of communication and the people with whom they are communicating vary greatly, but when all is said and done, communication is what most research administrators do most of the time. Given that fact, it’s quite remarkable that most research administrators have had to acquire their knowledge of communication and develop their communication skills without much formal training, i.e., on the job. For all of us, no matter what our specific role, this chapter is chock full of useful information that can be put to use very quickly.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶505, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶520), practical tools (at ¶530), and case studies (¶540). A “knowledge check” containing Q&As and discussion topics is included at ¶590.
Communications in Research Administration: The Farmer, the Cowman, and the Liaison

Kim Moreland
Associate Vice Chancellor for Research Administration and
Director, Research and Sponsored Programs
University of Wisconsin, Madison

Kennis Wessel, Ph.D.

The farmer and the cowman should be friends.
One man likes to push a plough, the other likes to chase a cow,
But that’s no reason why they cain’t be friends.
Territory folks should stick together,
Territory folks should all be pals.
—Oscar Hammerstein, Oklahoma!

A research administrator is a kind of middleman. As communicators, research administrators encounter a unique difficulty, a consequence of their position between two discrete, dynamic parties. They are liaisons, and this role produces a unique communication challenge.

The key function of research administrators is to bridge differences between constituencies who are driven by different goals and different working models, yet who are essential to each other’s very existence. These constituencies have different vocabularies, different calendars, and different motives. Research administrators must serve the needs of all. They must find tools of communication that suit the needs of each constituency. They must also promote their own cause, a role of service, and explain policies and procedures that are often determined by others.

These conditions inevitably create stress. Just as inevitably, the burden can be lightened by understanding the nature of communication. The tools of effective communication are essential to effective research administration.

The musical Oklahoma! depicts challenges facing two natural enemies, farmers and cowmen. In Oklahoma, a wild new territory, they inevitably compete over ways to achieve growth. Farmers and cowmen have different goals. They utilize resources differently. They are stretched to find common ground. But the territory is unforgiving, and their chances of survival improve dramatically through collaboration. Wise communication makes the difference between perishing alone or surviving together.

Similarly, wise communication can enhance the collaboration of faculty with sponsors and administrators. Research administrators stand at a communications nexus with those parties. They must assume leadership to enable interaction among constituencies. Effective communication by and through research administrators is the network by which folks stick together, by which they become “pals,” in the territory of research support.
The Territory Ahead

General principles underlie all communication in research administration. Although contextual differences influence communication choices, the principles have a broad reach, embracing all contexts.

This chapter explores some communication principles, drawing many examples from research administration. At the outset, an essential, inclusive model serves as a basis for discussing the communication needs of research administrators. Next, the chapter discusses media by which professionals communicate, with special attention to media used by research administrators. Third, the chapter lists key constituencies with whom research administrators collaborate, discussing attributes of each relationship and their influences on the character of communication. Fourth, the chapter delves into elements of strong communication, listing several effective tools and making recommendations. Finally, there is a discussion of essential purposes that guide effective professional communication.

§505.1 Principles of Communication

Basic principles of communication underlie the most sophisticated professional interactions. By identifying these principles, research administrators are able to improve communications at every level, from each simple, spoken word and each instinctive gesture to complex, formal systems of information exchange. By considering these principles, research administrators acquire tools to improve their professional communications.

Communication involves several factors, shown below in a communications model. Communicators should recognize a few basic components that are always present. They should also recognize the communications feedback cycle, the nature of symbols, and impediments that make communication difficult.

A Model of Communication

Communication models identify discrete, interrelated components of communicative acts. A simple model identifies

◆ a sender,
◆ a message,
◆ the medium (or media),
◆ the receiver, and
◆ impediments to effective communication.

Even a simple communication act is complex. In any single instant, the following factors are involved:

◆ The sender is the originator of a communication event. The sender may be a person, institution, organization, or other.

Example

Penelope, a research administrator, is a sender.
In any communication event, each contributor is a sender at some point in time. A sender may be active or passive; passivity itself is a message.

◆ The message is the content of communication. This content may be ideas, attitudes, or feelings. It may be intended or unintended. It may be explicitly stated, implied, or (sometimes erroneously) inferred. Ideally the sender knows what she intends to communicate.

Example

Penelope: “Professor Adams, your proposal doesn’t include full indirect costs.”

Usually the sender intends that a communication occur, but from time to time, unintended messages are sent.

Example

Penelope puts the proposal in a folder, straightens up, and glares at the researcher.

In this case, and in many professional situations, nuances can betray communications. For instance, regardless of what one is saying, body language can support the message or completely contradict it. When someone is speaking to the boss but she’s shuffling papers, the speaker feels a disconnect. Penelope’s actions and the boss’s shuffling of papers send messages that are probably unintended.

◆ The medium is the vehicle by which a message is transported from sender to receiver. In daily communications, research administrators have opportunities to select from a variety of media. Our most essential communicative medium is language, which may be written or spoken. Other visual and audible media also communicate, such as charts, graphs, props, and electronic media. Many factors contribute to the complete communication, such as body language, clothing, font choice, paper quality, screen size, and others.

Examples

Words:

• “You might wish to revise the budget to include indirect costs,” or
• “There is a university policy on indirect costs,” or
• “If you want to submit this proposal, you’ll have to get it right,” or
• “Look, dim-bulb, you don’t have a choice.”

Deeds:

Penelope —

• explains “indirect costs” (again), or
• refers the researcher to explanations on the Web site, or
• provides an example of a funded proposal.
Gestures, physical and verbal:

Penelope —
- speaks softly and slowly, or
- comes from behind her desk for less formality, more openness, or
- slams her fist on the desk.

◆ The receiver is the person who hears, reads, or otherwise perceives the message. Here, again, receivers become senders, exchanging roles with the original sender.

Example

Professor Adams, a researcher, is a receiver.

Impediments to Communications. Communications impediments are factors that prevent the message from being fully received or understood. They may be present in any communication setting. An impediment may occur if the speaker has a different vocabulary from the intended audience. Sometimes inefficiency in the medium such as a bad microphone (that causes “noise”), interruptions in a meeting, or an unfocused presentation intrude. Sometimes a difference of goals or attitude intrudes, causing the audience to “tune out” the speaker’s message.

Sometimes receivers stop hearing. For example, when the Oklahoma! farmer erects fences to keep cattle away from his crops but the rancher wants free-range grazing rights, the polar opposition may seem irreconcilable. Research administrators face an extraordinary challenge whenever they convey dense regulatory information, because the material is daunting and uninviting. In each situation, receivers may stop listening. Simple examples of communication impediments are included below.

Examples

Verbal: Language barriers, such as the jargon of research proposals.

Circumstances: The proposal deadline is this afternoon, which creates stress.

Physical setting: The furniture arrangement favors one person more than another.

Sounds: A new construction project is underway right outside your window.

Other Characteristics of Communication

Communication models give the impression that communication consists of discrete components that behave in predictable ways. That impression is faulty. Words mean different things to different people. Communicators often don’t take turns in polite ways. The ground shifts during communication as attitudes change and new information opens new challenges.

Communication Cycles. Communication cycles occur in even simple dialogue. A communication event generally continues beyond receipt of the message. A receiver may respond to the communication with the twitch of an eyebrow or a fully developed e-mail — and the response is itself a new message. These responses, both overt and
intuitive, communicate to the original sender. In turn, these may provoke some adjustment in the sender, stimulating a new message.

In this way, a receiver becomes a sender, and the original sender becomes a receiver. Such a “feedback loop” enhances communication effectiveness, since both sender and receiver adjust the message (and sometimes the medium) to meet the changing communication needs. Like the feedback loop in a thermostat, the communicators monitor the environment (air temperature), then adjust the message (turn on the heater) until some equilibrium is achieved (a new temperature). Ideally that equilibrium suggests that the message is understood, or that some level of agreement has been reached. In the example below, note that each response stimulates a new message.

**Example**

Penelope: “This proposal is excellent, but the indirect cost calculations are incomplete.”

Professor Adams: “What is missing?”

Penelope: “You need to charge indirects on the two subawards to other universities.”

Professor Adams: “But, wait. Isn’t that double-dipping?”

Penelope: “Good question. Here, let me show you. …”

Successful communication is the result of care in crafting the message and selecting the right medium for the specific receiver. Most successful communication depends on careful use of the feedback model. From the moment a message is set in motion, a good communicator monitors responses and adapts appropriately. Good communication is rarely one-directional, but involves sensitivity to the other communicator(s) and adapts to meet changing conditions. Communicators should recognize the virtual inevitability that conditions will change.

Particularly in sensitive exchanges, research administrators should consciously, continually evaluate the feedback they receive. For example, attitude and emotion often intrude during contract negotiations or dialogue about problems with a grant. An administrator should be ready to alter communications strategies. By doing so, one improves, for example, the likelihood of achieving a productive compromise on a contract. By adapting, for example, one may find creative approaches to cost overruns. Flexible, agile communication is a powerful tool.

**Symbols and Symbol Systems.** Symbols and symbol systems mediate communication. Although one sometimes speaks of “direct” communication, as when two communicators speak face-to-face, directness is an illusion. The degree of indirectness may vary, such as the difference between lovers’ whispers and an overseas “snail mail” letter. But an inevitable gulf sits between two communicators who, after all, have different minds with different thoughts. No “Vulcan mind meld” provides direct access from one mind to another.

Instead, communication is accomplished by means of symbols. The sender chooses a word (a symbol), with an intended meaning. But communicators must always be aware of the potential for differences in meaning. The intended meaning may or may
not coincide with the receiver’s idea for the same word. All communication is mediated by a symbol and by the mental activities of cognition and interpretation. Communication depends on an act of perception and an act of interpretation.

The set of symbols that pass between sender and receiver is the medium. Symbols permit us to refer to things and actions in absentia. For example, the words “elephant,” “grant,” “travel,” and “research” are symbols that permit us to conceptualize phenomena without being in their presence.

The referent of the word — the real elephant, real grant, real research, etc. — is the word’s most essential meaning. The most powerful symbol systems — languages and mathematics — obtain their power by an extensive vocabulary (the essential referential tool) and by their flexibility. The sophistication of language brings challenges to the user: word choice, syntax selection, clear enunciation, attitudes in speaking, and others.

*Different Kinds of ‘Meaning.’* To communicate effectively, it is critical to understand the implications of mediation. One must be aware that meanings are both conventional and personal. Thus, meanings are held in common (by convention) and are also unique to the individual (personal), based on social circumstance and experience. Meanings are not just those agreed upon, as in a dictionary. Meanings are in people. We have a dictionary definition of the word “flood,” but a resident of Phoenix will likely respond to that word differently than a resident of New Orleans. Consider that many words and concepts stimulate emotional interpretations. Possible reactions to “audit,” “FEMA,” “feminism,” or “misconduct” are simply examples of words that provoke divergence in meaning and/or feelings.

For the most part, physical gestures have personal meanings, but few have conventional meanings, as in a dictionary. One may infer meaning in someone’s body language, but inference is often faulty. In some cases, personal meanings may find cultural agreement. The head waggles of a subculture group may express attitude and group identity, but have limited meaning beyond the group. Still, some gestures form a vocabulary. Almost everyone in our culture recognizes nodding for “yes,” head shaking for “no,” “V for victory,” “V for peace,” and “thumbs up” for approval. In a different culture, the same gestures may have other meanings. Depending on the culture of the receiver, they may or may not be interpreted in a way that supports the intended message.

*Social Aspects of Communication.* Communication is inherently a social act. It may involve all aspects of social environments, including social status, power, and goals. Any communication either grows out of, or is grounded in, such social matters as perceptions of competency, experience, gender, race, age, and all other traits to which humans respond. Senders and receivers often have preconceptions of the “other” and the motives of this other. Good communicators are aware of — or intuit — the diverse social implications of every communication act. This awareness is the basis for crafting the medium (and possibly the message itself) to achieve the desired impact.

The best communicators try to identify their own preconceptions. For instance, a manager should at least be aware of how he or she responds to a speaker’s clothing, body language, and word choice. A research administrator may hold opinions of a researcher based on past interactions. Recognition of those biases is critical in crafting
effective communication, whether one is the sender or receiver of the communication. All parties should respond to the actual message in a communication, rather than to factors that may be irrelevant to the current situation.

A receiver is usually not passive. Humans instinctively create or derive meaning from a situation. Even when the receiver encounters a medium that is not laden with meaning, the receiver often infers meaning. A gesture or expression might be perceived variously as support for the message, as ironic denial of it, or as ambiguous. Good communicators modulate their messages, trimming out excess that can lead to misunderstanding.

1505.2 Delivering the Message: Selecting the Best Medium

Selection of the medium affects the character of the communication. Modern communications are often technologically sophisticated, providing new media with new solutions and new challenges. Research administrators, working under pressure with immediate deadlines, still have considerable resources.

Time is a factor in selecting a medium. On the one hand, one may have time to reflect on the best medium, as is usually the case with a policy change or a question about a cost transfer. But sometimes one must act immediately, as in the case of an impending application deadline, when a proposal must be changed prior to submission. With time, a host of alternatives is available, from e-mail to face-to-face meetings to express mail. In haste, one’s selection may be limited to the telephone or face-to-face dialogue.

Given time to select a medium, the communicator should suit the medium to the message and the context. The matrix included in Figure 1 offers some quick tips about selecting the appropriate communication medium.

<table>
<thead>
<tr>
<th>Medium</th>
<th>Advantages</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spoken</td>
<td>• Immediate</td>
<td>• Conversations</td>
</tr>
<tr>
<td></td>
<td>• Spontaneous</td>
<td>• Meetings</td>
</tr>
<tr>
<td></td>
<td>• Adaptive opportunities</td>
<td>• Phone calls</td>
</tr>
<tr>
<td></td>
<td>• Personality factors are vivid</td>
<td>• Speeches</td>
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<tr>
<td></td>
<td>• Expressive vocal effects can be used</td>
<td>• Discussions</td>
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<td></td>
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<td>• Debates</td>
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<td></td>
<td></td>
<td>• Interviews</td>
</tr>
<tr>
<td>Written</td>
<td>• Permanent</td>
<td>• E-mails</td>
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<tr>
<td></td>
<td>• Retrievable</td>
<td>• Letters</td>
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<td></td>
<td>• Reports</td>
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<td></td>
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<td>• Notes</td>
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<td></td>
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<td>• Memoranda</td>
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<td></td>
<td></td>
<td>• Agendas</td>
</tr>
<tr>
<td>Visual</td>
<td>• Subliminal influence</td>
<td>• Body language and</td>
</tr>
<tr>
<td></td>
<td>• Humans respond strongly to visuals</td>
<td>gestures</td>
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<tr>
<td></td>
<td></td>
<td>• Photographs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Graphs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Charts</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Illustrations</td>
</tr>
<tr>
<td>Multimedia</td>
<td>• Can deliver a complex message</td>
<td>• Cartoons</td>
</tr>
<tr>
<td></td>
<td>• Can be used to reinforce message</td>
<td>• Logos</td>
</tr>
<tr>
<td></td>
<td>• Receiver &quot;selects&quot; medium</td>
<td>• Flyers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Catalogs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Posters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Magazines</td>
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<tr>
<td></td>
<td></td>
<td>• Radio (when music/text overlap)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• MP3 players (when music/text overlap)</td>
</tr>
</tbody>
</table>
At a minimum, decisions about which media to use should be based on considering the factors included in Figure 2.

Speech and e-mail are generally the most accessible forms of office communications, and therefore the easiest to use. Multimedia, on the other hand, generally has a low ease-of-use and high costs. Confidentiality is of concern with all e-mail and, of course, when using any broadcast publication. It is easiest to protect confidentiality in private dialogue and with various kinds of mail, such as certified mail. Conversation and e-mail are often highly informal; letters tend to be more formal, as do published documents in official formats and bearing official letterheads and logos. Complexity can be inherent in any communication medium. Written materials may be long (complex) or short (less complex), and multimedia is inherently complex because of its ability to engage our minds at various levels simultaneously. Whatever other presentation strategies one employs, visual information is best communicated by visual means. It is much more effective to show a pie chart or molecular structure diagram than it is to describe and explain one verbally.

Our principal communicative media are spoken, written, visual, or multimedia. In practical terms, these are available to research administrators in such forms as person-to-person communication, e-mail, Web sites, letters, and electronic conferencing. Each of these offers advantages and has disadvantages. The medium should be selected for appropriateness to circumstances and needs. Below are discussions of and suggestions for effective use of different communication media.

**Person-to-Person Communication**

Most communication is interpersonal. The standards for interpersonal meetings vary. If the meeting is spontaneous, it is probably informal. If scheduled, it tends to be more formal. For relatively formal meetings, some guidelines should be clearly stated in advance, such as expectations for participation and standards of preparation. Advance information helps participants contribute efficiently or merely process content effectively. Research administrators often feel that the workday consists of meeting after meeting — a common malady that prompted Patrick Lencioni, a management consultant, to produce a book called *Death by Meeting*.1 Frustration increases when time is wasted in meetings that are poorly planned or badly managed.

Managers often schedule formal staff meetings on a regular basis. In such meetings, a published agenda helps maintain efficient use of time. Ideally every participant will be consulted in advance about topics for discussion at the meeting.

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Free Flow of Ideas. In formal meetings, regardless of the number of participants, efficient communication is achieved by keeping to the agenda, diving quickly to the gist of each topic, and keeping meeting goals in sight. Summaries help keep attendees focused on decisions and actions. Such summaries typically restate essential points discussed, agreements made, and possibly also minority opinions expressed. Summaries could come at the end of each agenda item or at the end of the meeting.

Standards of conduct should be stated in advance. When differing opinions are expressed in person-to-person meetings, rules of fairness and respect come into play. It is important to listen carefully to an opposing view. If summaries of the discussion are written and published, those who hold minority opinions should have an opportunity to contribute, such as a chance to review the summary before it is published. Often the tone of a meeting shifts when opposing views are aired. Meeting facilitators or leaders should keep discussions rational, content-based, and free from personal remarks. They should aim for civility in all discourse.

On the other hand, disagreement is inevitable. All participants should be encouraged — overtly, if necessary — to respect differing points of view. They should be cautioned to avoid dominating the meeting with their opinions. Good leaders ensure that all participants respond to content without becoming defensive. This is done by overt compliments and expressed appreciation. Whether a meeting is full of agreement or conflict, a good manager will frequently say “thank you for your ideas,” or “this was a good discussion; I appreciate your contributions.”

Listening Skills. Research administrators should cultivate listening skills. Ideally half of a communication cycle is receiving the other’s input. Listening well expresses respect for the other communicator and for the principle of effective communication.

Communicators should place themselves in the shoes of the “other.” They should remember the bumper sticker: “I know you believe that you understand what you think I said, but I’m not sure that you realize that what you heard is not what I meant.” Each speaker is responsible for clarifying the message, and conversely, each listener

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**Figure 3: Tips for Developing Good Listening Skills**

- For a substantial period of time, talk little and listen carefully.
- Provide encouragement to the other person with body language and words.
- Draw out the thoughts of the other person: ask questions, and elicit opinions and values.
- Restate ideas expressed by the other person, and ask them to confirm whether you have heard correctly.
- Be careful to avoid correcting every inaccurate interpretation of your own remarks; keep dialogue positive.
- When points of view are expressed with emotion, use analytical questions to get beyond emotion to the reasons behind viewpoints.
- Be careful to hear what is actually said and not what you want to hear.
must take pains to hear what the other communicator actually says. Care in listening is critical in effective communication.

To develop good listening skills, research administrators may wish to practice the tips shown in Figure 3.

**Body Language and Vocal Tone.** When two people meet face-to-face, the degree of complexity increases because many aspects of personality, dress, and gesture enter into the equation. Nuances of body language and vocal tone are tangible factors in the communication.

Figure 4 shows some tips for using body language effectively.

<table>
<thead>
<tr>
<th>Figure 4: Tips for Using Body Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Be careful to convey honesty, since the body may send signals that contradict spoken language.</td>
</tr>
<tr>
<td>• To imply support for a speaker, make eye contact, lean forward slightly, or nod.</td>
</tr>
<tr>
<td>• Be aware of looking away or down, which conveys lack of confidence or disinterest in the other communicator.</td>
</tr>
<tr>
<td>• Be aware of wrapping your arms around your body or covering your eyes, which convey conflict.</td>
</tr>
<tr>
<td>• Observe your body language in a mirror, or request feedback from a trusted friend (not a co-worker).</td>
</tr>
</tbody>
</table>

**E-Mail**

E-mail is user-friendly, offering tremendous power in speed and flexibility. E-mail is often more efficient than personal dialogue, since users can focus exclusively on the written context. Since the message is written, e-mail offers the advantage that it can be stored, re-examined, and re-sent as needed. E-mail is particularly useful for notes to staff and other colleagues.

E-mail is sometimes counter-productive, however. Occasionally e-mail is abused by those who mix personal and professional messages, or who use professional settings for private messaging. The speed advantage of e-mail is sometimes a disadvantage, since e-mail is often written hastily, without the checks one normally makes in more formal correspondence.

**When to Use – and Not Use – E-Mail.** E-mails are risky in some contexts. When the topic is emotional, sensitive, or complex, one should consider using other media instead of e-mail. For instance, avoid e-mail for personal critiques or evaluations. For confidential exchanges, face-to-face meetings or protected mail is much more secure.

When the topic calls for thoughtful discussion, e-mail often results in long, repetitive strings — and these tend to exacerbate rather than relieve the problem. This problem is shown in the example below, the final transmission of a long string of e-mail exchanges. This example, discussing a contract negotiation, came to be known as the “Dry Cleaning Theory of Research Administration.” Throughout the correspondence, a
steady deterioration of tone evolved with each e-mail, causing a shoot-out mentality and hurtful accusations. At the endpoint of the exchange, the pot boiled over, leading to an impasse between the writers. This exemplifies knee-jerk spontaneity, the result of e-mailing without the restraints usually used in direct speech. Haste caused unwise and unthinking liberties, unkind accusations, short-sighted analysis, and a superficial recommendation. Notice the hasty, ill-considered style and content.

Example

Kevin – Please read the trail of E-mail exchange below. I will really appreciate if someone can explain as to why things going for review and disposal to Eleanor sits on her desk for a long time. May be she is over worked by handling too many things. If you recall I voiced this concern long time ago and at time I was assured by Maggie B., who was new to the job, that she will take care of this issue. Why RSP can not set “in and out” schedule? Dry cleaning shops have it: in by 11 AM out by 4 PM. I understand that tight schedule will not work here. Thus, why not: In by “Tuesday — out by Friday.” As far as I could see or understand most of the things don’t get done until several reminders. In this process don’t you think someone’s time is wasted. The worst part of the whole system is that if there is an issue then the PI is not kept informed. In short, I fail to understand why signature of a simple amendment should take so long? [Names have been changed]

This e-mail expresses unveiled hostility. But even neutral e-mails are subject to communication error, such as misinterpreted meaning or tone. Neutral intentions are often misconstrued as conveying a negative tone. A suggestion is often misconstrued as an instruction or command. A deadline reminder is often taken as personal criticism. A humorous remark is often read as sarcasm. The research administrator should compensate for the brevity of e-mail and haste in writing and try to anticipate the spirit of the receiver in reading it.

**Figure 5: Tips for Using E-Mail**

- Message titles should be specific, meaningful, and relevant.
- E-mail should be brief.
- Slow down to proofread for clarity and accuracy, to reduce misinterpretations.
- Carefully select recipients; remember an entire address book opens at a single keystroke.
- Distinguish between “respond” and “respond to all.”
- Remember, e-mail is not secure; encryptions are easily broken.
- Avoid attaching large files when you’re sending to many recipients.
- Distribute large files over multiple e-mails, or place in a common file or on a Web site.
- Overuse of fonts and graphics can be annoying, particularly when viewed by users using various systems.
Unless one tempers the advantage of e-mail — speed — by care and thoughtfulness, e-mails can create as many headaches as they cure. Reasonable guidelines can make e-mail effective and ethical. Figure 5 offers some tips for e-mail users.

Research administrators often communicate in jargon and acronyms. Although jargon is central to the work, it is not always understood by the receiver. Even within the “in group,” such terms change quickly. A new shorthand will not be equally understood by everyone. Consider the example below of an e-mail written in a shorthand commonly used for instant messaging and social exchanges. The translation of the e-mail follows the example.

**Example**

**E-mail:** JW Pls gimme a cll l8tr wen ur fre. I lft the ppw and 411 @ home. I’m OOO at 5pm. AFAICT U R right, we nd sig b4 acct. SWDYT? if you need help, call 2nite @ home B4 10p or SMEM BCOZ i’m bZ nw. Stil nd to RTM and upd FAQL. NUFF . I’ll BCNU. FTTB HAGD. POOF.

**Translation:** Just wondering. Please give me a call later when you are free. I left the paperwork and information at home. I’m out of the office at 5pm. As far as I can tell, you are right, and we need the signature before an account can be set up. So, what do you think? If you need help, call tonight at home before 10p or send me e-mail because I’m busy now. Still need to read the manual and update the frequently asked questions list. Enough said. I’ll be seeing you. For the time being have a good day. Bye.

**Business Letters**

Effective letters are clear and interesting. They keep to the point. They are economical and complete. These attributes are all achieved best by thinking before writing, then revising the written word doggedly.

Good writing has a purpose, and the purpose should be vivid. Professional correspondence, which is inherently purposeful, should be targeted to the recipient. The purpose should be stated unambiguously in the letter. The best placement for a statement of purpose is in the first or second sentence. For instance, the first sentence of a cover letter for a job opening within the office of sponsored projects might be “This letter is an application for the position of Grants Specialist.”

Another example is the clear, strong statement of intent that opens this 1963 letter from President John Kennedy to Alabama Governor George Wallace —

*In response to the question raised in your telegram of last night, Federal troops would be sent into Birmingham, if necessary, under the authority of Title 10, Section 333, Paragraph 1 of the United States Code relating to the suppression of domestic violence. [Emphasis added]*

Good writing is user-friendly. All good communication is about the receiver, and good letter writing keeps the reader’s mind free of distraction, so the reader remains attentive and the journey is clear.

Good letter writing is based on solid information. The reader should be given enough information to understand the writer’s claims. On the other hand, excessive
length is a serious handicap, since it obscures essential concepts. A writer should think in terms of “take-away” value: what essential ideas should the reader take away from the letter? A research administrator should trim away any excess material that detracts from the essentials.

**Coherent Structure.** Good letter writing has structure. Generally that structure is implicit in the central point of the letter, but should be coaxed into view by the writer. Some common structures are

- chronological,
- cause-effect,
- comparison-contrast,
- claim-evidence, and
- topical.

Within these, ideas may flow in a sequence, such as

- best to worst,
- early to late,
- simple to complex, or
- weak to strong.

On the other hand, the sequence of ideas may be the reverse of any of these, or based on other coordinates entirely. In a single letter, a writer may use multiple structures. For example, a chronological format was used in Dr. Henry Kissinger’s 2005 letter to Master Sergeant Broussard on the fall of Saigon. The letter followed Kissinger’s time line of the 1975 event, indicated here in a summary of key phrases —

The Pentagon’s plan for implementing the final evacuation were [sic]

far from precise …

As Americans were being lifted from the roof …

By now it was early afternoon in Washington …

As soon as I thought the last helicopter had left …

Two hours later, North Vietnamese tanks rolled into Saigon …

And now it was too late to alter the course of events …

In his 1963 “Letter from the Birmingham Jail,” Dr. Martin Luther King, Jr. used multiple structures, shown below in summaries of key phrases. In one section, he varied the standard cause-effect structure, giving it the form of effect-from-cause —

I think I should indicate why I am in Birmingham. … I … am here because I was invited here and because I have organizational ties here. … But more basically, I am here because injustice is here. … I must respond to the … call for aid.

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In another section of the letter, he used a *chronological approach* —

... Negro leaders sought to negotiate. ...

Then, last September, came the opportunity to talk to leaders. ...

As in so many past experiences, our hopes had been blasted. ...

Then it occurred to us. ...

And in yet another section, Dr. King structured the letter by using *comparison-contrast* —

Now, what is the difference between [just and unjust laws]?

Let us consider a more concrete example. ...

Let me give another explanation. ...  

Sometimes a law is just on its face and unjust in its application. ...  

I hope you are able to face the distinction I am trying to point out. ...

**Rhythm and Flow.** Good writing has a rhythm. The elements of an idea should sometimes flow and dance, or sometimes hit the reader like a brick. Rhythm helps a reader follow the thrust of ideas, bringing focus to the key idea at the best possible moment.

In a letter to Native Americans who visited the White House, President Thomas Jefferson emphasized his central idea with a rhythm of phrases. He used relatively small word groups to build complex thoughts. He also varied sentence length for interest and emphasis, as follows:

Brothers and friends of the Miamis, Powtewatamies, and Weeauks:

I receive with great satisfaction the visit you have been so kind as to make at this place, and I thank the Great Spirit who has conducted you to us in health and safety. It is well that friends should sometimes meet, open their minds mutually, and renew the chain of affection. Made by the same Great Spirit, and living in the same land with our brothers, the red men, we consider ourselves as of the same family; we wish to live with them as one people, and to cherish their interests as our own. The evils which of necessity encompass the life of man are sufficiently numerous. Why should we add to them by voluntarily distressing and destroying one another? Peace, brothers, is better than war. In a long and bloody war, we lose many friends, and gain nothing. Let us then live in peace and brotherhood together, doing to each other all the good we can.

Good writing varies the sentence type and length. Some sentences should be simple. Some sentences should be compound, having at least two main clauses. Others should be complex, pulling multiple elements together in a sophisticated way and drawing the reader’s eye to a compelling point. In the example above, notice the force of “Peace, brothers, is better than war.” Jefferson achieves his effect by a series of complex sentences followed by this simple, direct punch.
Good writing uses the active voice. It is more compelling to write “the committee decided” than “it was decided by the committee.” It is more compelling to write “please decide and advise” than “the decision should be reached and I need to be advised.”

Good writing trims out excess. Good writing concludes with a memorable point. Franklin D. Roosevelt’s advice for public speakers is equally apt for writers: “Be sincere; be brief; be seated.” Figure 6 offers some tips for effective letter writing.

<table>
<thead>
<tr>
<th>Do this:</th>
<th>Avoid:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use short words</td>
<td>• Complex words</td>
</tr>
<tr>
<td>• Use short sentences</td>
<td>• Long-winded sentences</td>
</tr>
<tr>
<td>• Vary the kind of sentences</td>
<td>• Repetition of the same type of sentences</td>
</tr>
<tr>
<td>• Write in a style similar to your speech</td>
<td>• Careless grammar, spelling, or punctuation</td>
</tr>
<tr>
<td>• Make notes before you write</td>
<td>• Jargon</td>
</tr>
<tr>
<td>• Draft first version completely before revising</td>
<td>• Stuffy diction</td>
</tr>
<tr>
<td>• Revise relentlessly</td>
<td>• Too many pages (keep it to one!)</td>
</tr>
<tr>
<td>• Get a second opinion for an important letter</td>
<td>• A vague address (e.g., Dear Madam)</td>
</tr>
<tr>
<td>• State your purpose early and clearly</td>
<td>• A page without margins</td>
</tr>
<tr>
<td>• Build credibility: use evidence and references</td>
<td>• Depending on spell-check alone</td>
</tr>
<tr>
<td>• Name the action: tell the reader what you want him or her to do</td>
<td>• Depending on grammar-check alone</td>
</tr>
<tr>
<td>• Be optimistic and affirming</td>
<td></td>
</tr>
<tr>
<td>• Use humor when possible</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 6: Simple Dos and Don’ts of Letter Writing**

**Web Sites**

Web sites are communication tools. In designing them, research administrators should use the same standards that apply to any communication. Most importantly, the design should be user-friendly.

Offices of sponsored projects (OSP) will find different communication preferences among their constituencies. Many who use OSP services prefer to speak directly to a live person. Others prefer to read. The variety in preference reflects common differences in the way people communicate and process information. If an OSP has a useful Web site — a site that is navigable, thorough, systematic, and user-friendly — customers will be able to solve many of their problems independently. This provides two advantages: the consumer who prefers to read may find the answer online, and the burden on OSP staff will be reduced.

**Designing the Home Page.** The first page a visitor encounters at a Web site is the home page. It should be clean and simple. Ideally it will fit on the screen without the need to scroll in any direction. It should include the following:

- Name of the institution
- Name of the office
- Links to relevant pages, designed for quick access
A design in compliance with institutional standards, e.g., that incorporates a prescribed masthead or format

The home page also typically offers the following:

◆ Contact information for the office and other appropriate officials
◆ Mission statement of the office, stated briefly
◆ Some featured element, e.g., “What’s New,” “Hot Topics,” or highlighted research
◆ Graphics or imagery, usually of researchers or research

The home page should be designed so a user unfamiliar with the site can scan the page and select a link quickly — ideally within fifteen seconds, or thirty seconds at most. Titles of the links must be accurate and familiar to a first-time user. Such eloquence calls for considerable organizational skill, such as finding obvious categories for content offered. Some tips for basic Web page design are provided in Figure 7.

To keep words to a minimum, use key words only. Avoid long narrative statements. If a title will suffice, use it. If a paragraph-length statement must be used, such as part of a press release to spotlight research, keep the sentence number to a minimum and add a “Read more …” link.

To find categories that are obvious, think as a reader. View the site not as an administrator giving information, but as a researcher looking for information. A research administrator will certainly want to provide critical information, but it should be organized for the unfamiliar reader. For example, many university Web sites include a guide for principal investigators to use in the preparation and submission of proposals.

Additional Design Considerations. “Negative space” is a design term. Given some featured visual element, the negative space is whatever “empty” space surrounds it. On this page in the Guide, the negative space is the “uncolored” part of the page or paper (sometimes called “white” space) where there is no printing or design element, most prominently the margin that surrounds this text. The margin is a negative frame, bringing the eye to the text. In advertising, designers use negative space to feature their particular widget. Effective use of negative space, which holds inherently less interest

Figure 7: Tips for Basic Web Page Design

Web page designers, at a minimum, should adhere to the following standards:

• Use few words: limit the page to a 1,500-word maximum.
• Use categories or headers that are obvious and intuitive.
• Sprinkle the page with considerable “negative space,” i.e., unfilled “white” space around words.
• Employ a design that directs the eye to key elements.
• Use few font types, ideally no more than two.
• Avoid redundancy of content.
than the widget, helps focus the reader’s eye on the product. As negative space increases, clutter decreases. Web designers use negative space to direct the reader’s eye to useful points — such as links — more quickly.

The Web page should be designed using other tools that also direct the user’s eye. Some standard tools are lines or boxes that help categorize their contents. It is useful to feature information by font selection, color, and arrangement.

Visual redundancy is often synonymous with clutter. In practical terms, it is often an issue of misdirection. Many sites show multiple routes to the same or similar content. For instance, there may be multiple links to “policies and procedures.” If so the user must search through one link, then also examine another link to verify that he has read all relevant information. On the other hand, if all relevant information is contained under one link, the user saves time by conducting a single search. (The burden then shifts to the Web designer, who must structure the second page in a way that subdivides “policies and procedures” productively.)

Electronic Conferencing

Electronic conferencing is changing the way people work and share information. It offers a low-cost, efficient tool to communicate simultaneously with multiple locations. For instance, on September 11, 2001, the chief operating officer of a large research institute found herself stranded 3,000 miles from home. On a four-day bus ride back, she realized that electronic conferencing could have circumvented the expensive trip altogether. The meeting was indispensable; the trip was not. Returning home, she urged her facilities planners to equip more meeting rooms for electronic conferencing.

Electronic conferencing is commonly used to conduct meetings or carry out negotiations. It can also deliver inexpensive training programs such as online broadcasts. The National Council of University Research Administrators (NCURA) enjoys tremendous success with these programs. They reach a wide audience who keep current on information, but remain at their home institutions as they do so. Electronic conferencing has been well received, particularly as a tool of direct, timely communication.

Television adds to communication complexity. When public speech is mediated by television, the communicator must adapt. The new challenges come partly from the visual component, partly from the auditory. Tips for electronic conferencing are included in Figure 8.

Figure 8: Tips for Effective Electronic Conferencing

In electronic conferencing, the camera is most often static. It does not follow the speaker. The speaker must either step into the camera’s frame of view, or the speaker will be off camera. Alternatively, the camera may show a group of speakers, perhaps seated at a table. The speaker should be aware of the camera’s position at all times.

Tip #1: As a presenter, know where the camera’s frame is, i.e., where the edges of the visual image are. Whenever possible, move into the camera’s frame before making a comment.
Figure 8: Tips for Effective Electronic Conferencing (continued)

Viewers prefer to look at the person who is speaking. There is a visual aspect of “hearing” spoken language. (Ever notice in a theatre performance how often you turn your head to look at the speaker?) If someone is speaking off camera, a viewer, who instinctively wants to see the speaker, may find it difficult to follow the conversation. A viewer’s understanding improves dramatically when the speaker is visible. Also, when the speaker is visible, the viewer will associate values and attitudes with the speaker. As a presenter, be certain you know what the camera can “see.”

Tip #2: On camera, speakers should remember to speak directly to the live audience and to the “viewer in the camera.”

Any speaker enhances communication by making eye contact with audience members. On television, communication with the viewer is enhanced when the speaker makes comments directly into the camera. Political candidates, for example, often look directly into the camera when making a critical point. Since it feels impersonal to speak to a camera (an inanimate object), speakers should imagine a real-life person sitting inside the camera, listening to the speech — someone who is friendly, but who needs to hear the message you have to offer. Look directly at the camera, just as if you were making eye contact with someone physically present.

Tip #3: Viewers respond strongly to visual stimuli.

Movement draws attention. When the camera shows a group, rather than an individual, the relative size of each person appears smaller. In such cases, movement is less visible. When you begin speaking, make sure you draw attention to yourself by moving in some obvious way. If movement occurs at the beginning of a statement, it improves the viewer’s chance of figuring out who’s talking, which improves understanding. Otherwise, the viewer may hear a disembodied voice and not be certain who is talking.

Tip #4: A microphone is easily misused. Remember to always speak into the microphone.

Know where your microphone is. A lapel microphone that snaps on to clothing can affect clothing choices. Select buttoned garments and garments with collars; they provide more places to attach the microphone. With a lapel microphone, be careful to avoid striking it with a hand or pressing it against a lectern, both of which cause distracting noises.

If, on the other hand, the microphone is mounted on an arm or pedestal, be sure to keep it in front of your mouth. If the microphone is static and you turn your head away from it, the sound will be lost to the viewer. In such cases, if you must turn your head to the side, lean away from the object you’re looking at and keep your mouth pointed at the microphone. For instance, if you must turn left to see a PowerPoint slide, lean back to the right, twist, and lean forward when you do, so the microphone is still in front of your mouth. The bottom line is to always speak into the microphone.

Tip #5: Clothing and accessory choices are important in teleconferencing.

In choosing clothing and accessories, consider your background. If you are speaking in front of a PowerPoint screen, try to wear clothing that contrasts with the slides. If your slides are mostly light, dark clothing will help make you more visible. If your slides are mostly dark, the reverse is true. Accessories should generally not be highly reflective, because the lighting will make them stand out and distract the audience.
Using Multimedia and Multiple Forums

Marketing strategists reach their targets by multiple approaches, using different types of media including multimedia. A multimedia presentation typically features spoken, video, musical, and other media blended together. Each of these elements may reinforce the message by repeating it in various media. For example, in a television commercial, the spoken words might say “our trucks are tough as bulls,” while simultaneously displaying the image of a bull breaking through barriers and playing bold, martial music. The image and the music reinforce the truck’s major selling point.

Similarly the standard PowerPoint presentation used by a speaker is inherently multimedia.

Multimedia tools enhance communication in four ways:

◆ First, the message is expressed in more than one way, reaching the audience intellectually and subliminally.
◆ Second, the visual element is potentially more compelling for many people.
◆ Third, because more senses are engaged, one is more likely to pay attention.
◆ Fourth, multimedia is so common in our culture that audiences have come to expect it.

Multimedia Presentations. In professional America today, many multimedia presentations use Microsoft PowerPoint. This program has the potential to include even more extensive media than most presenters actually select. But its versatility and wide use do not necessarily imply maximum effectiveness.

For all its advantages, PowerPoint is arguably overused. Its appeal has made it ubiquitous. But PowerPoint presentations have common problems. Speakers get lost next to the screen. Speakers often put their entire text in the program, and they end up

Figure 8: Tips for Effective Electronic Conferencing (continued)

Tip #6: Lighting is a crucial component.
Standard room lighting casts awkward shadows in a teleconference. If possible make sure light shows directly on your face; you will see the glow in your eyelashes. In general it is more important for you to be seen than it is for you to see the live audience. If your presentation is accompanied by PowerPoint slides, make sure room lights are low, because the camera will have more difficulty rendering the projected slides if any room light is up. On the other hand, make sure your face is illuminated — by a small spotlight, for example — so viewers can see your face and lips.

Tip #7: Build sharp contrasts into slide design.
Any projected image needs contrast between elements to make important features stand out. But contrast diminishes when viewed by a camera. Plan ahead by building sharp contrast into your slide design. Use simple graphics with “negative space” around them. Make sure that contrasts of light and dark are built into the slide design. Also be aware that font sizes need to be larger when a camera must “see” them. Remember that on camera, words at the margins of the screen are difficult to read.
reading aloud from the slide on the screen. Speakers often use far too many slides, with far too many words. An exception to this may be when speaking to nonnative speakers of English, who may have better comprehension when reading, rather than hearing, the presentation. In general, however, PowerPoint is most effective when the speaker uses it to reinforce and amplify a presentation, rather than to become the primary medium.

Using Various Methods. The term “multimedia” implies a single presentation using overlapping media. But any communication can be enhanced by using a variety of media. A research administrator should identify two or three media that most appeal to a specific target audience. One says “I love you” by words, flowers, gestures, and many other means. Similarly there are many ways a research administrator can say “meet this deadline” to principal investigators. One should vary the communication resources.

For example, modern political campaigns are extraordinarily diverse. They reach their constituencies through direct address (in-person speeches), news sound bites, television ads, print ads (magazines, newspapers), mailers, posters and billboards, flyers, door-to-door canvassing, telephone solicitation, and the Internet. Their campaigns are positive (affirming the candidate) and negative (belittling the opponent). They are complex (presidential debates) and simple (sound bites). The images are warm (kissing babies) and forceful (pounding lecterns). They are humorous (anecdotes mocking opponents) and serious (policy documents). Such diversity is effective because it reaches multiple constituencies. More to the point, it reaches the same constituency in multiple ways.

Repeating the Message. To maximize learning and comprehension, the administrator should spread communications out over time, reinforcing by repetition. When various media are used, the administrator should unify the message across media. A communications campaign, which reaches the constituency via several media, should be unified by consistency: repeated use of the same fonts, the same language, and the same graphics. If possible, the “look” of the message should be consistent across e-mails, flyers, mailers, and letters. In other words, “brand” the message. Consistency, reinforcement, and repetition are powerful tools.

For research administrators, communicating change is central to the job. Whether it’s a change in policy, a change in procedures, or a change in electronic systems, the administrator devotes significant time to informing constituencies about new events that affect their research projects. For example, the use of Grants.gov for proposal submission requires multiple approaches to transmitting complex information to faculty and staff. Institutions need a complete arsenal of communications tools — from small group discussions to formal presentations to Web sites — to reach the many people who have to learn new processes and systems. (For further discussion of Grants.gov, see Chapter 900.)
Communicating with Differing Constituencies

Understanding the “other” communicator is essential to good communications. In professional contexts, research administrators encounter categories of “others” whose relationships with the OSP have reasonably consistent patterns. There may be consistency with the farmer; there may be consistency with the cowman. But the farmer and the cowman are not the same constituency. To communicate effectively, a research administrator must understand the goals, needs, and working methods of each. This information will not be static; good working relationships are invented, revised, and reinvented.

Administrators

Research administrators serve the institution, whether they sit in a central office, a college, or a department. Often, particularly for departmental research administrators, this translates into support for a faculty investigator. The departmental administrator provides an effective bridge between central research administrators and investigators. Offices of research administration often find it easier to transfer information to departmental administrators than directly to faculty investigators. Administrators may intercede on behalf of faculty. This is particularly true in regard to complex regulatory or costing issues.

Communications between university administrators and the OSP frequently transfer information about either a specific grant or university policies and procedures for handling groups of grants. These policies are essential for coherent application of institutional plans. Whether the policies are created by the OSP or promulgated by the federal government, it is often the burden of the OSP to communicate these policies to the faculty and departmental constituencies.

This is done best through a variety of forums. Multiple media are often needed to reach a constituency effectively. For instance, a new policy for cost transfers, based on federal regulations, will be most effective if it is developed collaboratively with administrative representatives. The participation of research administrators who represent all parts of the campus helps distribute ownership. This often results in a plan for implementation across the campus that is more likely to serve the needs of faculty and the research infrastructure.

Often administrators raise problems for discussion and resolution. Frequently these situations require conversations with sponsoring agencies or other university administrative groups. In such discussions, the presence of faculty and administration, both departmental and central, allows for mutual problem solving and enhances the prospect for positive resolution.

Faculty

Conversations between faculty and research administrators are made complex by the dual nature of the relationship. The OSP exists to facilitate research. Conversely, the OSP is called upon to protect the institution’s interests and to influence faculty researchers. In particular the OSP may regulate faculty researchers on compliance issues.
This double bind inevitably confounds communication and elevates stress for both parties. All too often, it feels like “us vs. them” (for both parties).

In this relationship, research administrators are frequently seen more as gatekeepers than as facilitators. The pressures on faculty are extreme. They often are expected to write grant proposals, create new knowledge, support a research lab, and also teach and contribute to the university. Consider their frustration when, after spending long hours completing a proposal, they face an OSP staffer who insists on changes before a signature can be added. In that situation, the research administrator’s gatekeeper role is in the forefront.

The stresses on faculty, while very real and urgent, often are not well understood by research administrators. Conversely, the pressures on research administrators to perform, compounded by limitations on time and resources, often are not fully appreciated by faculty. Both groups have the same ultimate goal: securing funding to support research. But they hold different perspectives on what is necessary to obtain funding and to manage it responsibly. As much as possible, research administrators should take initiative to discuss this dilemma with the faculty. Although it is difficult, the job of research administration is customer service.

**Customer-Service Focus.** The advice for research administrators given below can apply in a variety of contexts. Research administrators should remember that they serve the faculty in the following three basic ways:

◆ They are present to help researchers identify, apply for, obtain, and administer funds from an outside agency or organization. As part of that mission, research administrators help maintain standards required by sponsors and their own institutions. Without those standards, both faculty and institutions are in serious jeopardy.

◆ They are not generally rule makers. Their responsibilities for rules enforcement must be moderated by a willingness to offer alternatives and guidance. They are liaisons between researchers and sponsors or between researchers and policy makers. They are facilitators whose purpose is to communicate the rules of others while making sure that faculty can still perform their research.

◆ In their role as helpmates, research administrators must convey support, understanding, and civility. They must take the high road in modeling communications ethics.

**Dealing with Late Submissions.** One of the most common issues facing research administrators is the problem of late submission of proposals. Researchers must understand that OSP offices face a volume of applications, and that submission to a sponsor is only the last step in a sequence. Inevitably pressure mounts on the researcher to meet the deadlines of the OSP, and on the OSP staff to forego review and just sign the proposal.

Researchers must be educated to issues surrounding the review process, workload volume, and thoroughness in completing applications. The OSP staff must be trained and reminded to
◆ understand pressures on researchers;
◆ remember the OSP role as service provider; and
◆ communicate requirements for submission — clearly and accurately.

As stress mounts, OSP staff will inevitably feel the challenge of being “middle-men.” The OSP may find that workshops and communiqués to administrators will help defray the “kill the messenger syndrome” that rears up around deadline time.

Ongoing Communications. Once an award is received and the project under way, those same principles still hold true for interactions with faculty. Good stewardship of sponsor funds requires increasing accountability at the institutional level and at the faculty level. Although an OSP could once protect faculty from audit penalties, the current regulatory climate demands personal and institutional accountability. There are new pressures on research faculty to understand fully the complex regulatory issues. These forces have resulted in new tensions across the research community. Clear and effective communication is a powerful tool in forging partnerships for the research enterprise.

Sponsors

One purpose of research administrators is to advocate for the research community. But rules of the game are established by sponsors. They pay for the research, so they establish the guidelines.

Fortunately there are opportunities for research administrators to discuss policies and procedures with many sponsors, especially with federal agencies. Through informal, one-on-one conversations with agency representatives, research administrators have the floor to engage sponsors on topics of mutual interest. Through more formal mechanisms, such as the Federal Demonstration Partnership, there are structured discussions on ways to improve and streamline the processes. (For more on the Federal Demonstration Partnership, see www.thefdp.org.) When the researcher’s time is constrained, research itself is inhibited. In a number of instances, such discussions have resulted in changes that benefit both the university and the sponsoring agency.

In talking with sponsors about a specific project or with regard to agency policies, and to facilitate communication with sponsors, research administrators should consider the tips included in Figure 9.

**Figure 9: Tips for Communicating with Sponsors**

- Be well prepared before contacting the agency.
- Understand agency policies and standard practices.
- Formulate a case for the request, in keeping with agency standards.
- Build a relationship to whatever extent is possible.
- Take pains to understand the interplay between policies of the agency and policies of the institution.
- Exhibit civility and courtesy in all discourse.
Elements of Strong Communications

Effective communication is tailored to the receiver, the “target” of the sender’s intentions. All good communication begins with understanding the target audience. Henry Ford once wrote that success in life comes from “the ability to put yourself in the other person’s place and to see things from his point of view — as well as your own.” In practical communication, this applies equally to the briefest e-mail and a meticulously prepared keynote address.

Before engaging in a communication act, a few fundamental questions should be asked:

◆ Who is the target?
◆ What does this target audience need/want to understand, and what’s in it for them?
◆ What are the characteristics of the target audience?

This last question is the most difficult to address. To start the process, consider these questions:

◆ What does the target audience know about this subject?
◆ What will be the target’s attitude about remarks presented?
◆ What will be the target’s attitude toward the presenter?
◆ What are the target’s agendas (apparent and hidden)?
◆ What are the target’s values?
◆ What will worry or assure this audience?

Word Choice

Communication choices should be affected by an analysis of the audience. Language should be, essentially, the receiver’s language. In the *Phaedrus*, Plato wrote that a communicator should match “the type of speech to each type of soul.” By this he meant the speaker should use the concepts of the person to whom he is speaking; when speaking to a carpenter, use language familiar to a carpenter, but use different language when talking to a priest. In discussing a technical area like research administration, it is particularly important to choose words that are accessible to the target audience.

Simple words tend to be most effective. Clarity is achieved by focus, and simplicity focuses best. Extra words can lead to mental clutter. Polysyllabic words and complex sentences also can be clutter. Outside academia, scholarly language often is ridiculed and spoofed. Regardless of who the target may be, the communicator should weed out complexity and stress key points.

Using Jargon. Among peers, professionals use discipline-specific language, or jargon. For example, some words are unique to accountants, some are specific to sponsored program accountants, and other words are specific to sponsored program accountants who use PeopleSoft. Each level of specificity involves a more narrow jargon than is used by the wider group. Jargon is a communication shortcut useful to the “in” group. Outside the immediate group, jargon inhibits understanding and impedes
communication. Even when a speaker takes time to define a jargon term, a new user of
the term may have difficulty following it. A business administrator, for instance, may
be challenged to understand the Higgs Field even after the physicist has defined it.

Evidence and Support

Professional communications generally identify problems and offer solutions. Research
administrators of every stripe must develop skills in making and defending arguments
or, more narrowly, skills in making assertions and providing evidence in their support.
The most common kinds of support are discussed below.

◆ Personal experience, either that of others or one’s own, has special credibility because
it carries the force of direct, firsthand knowledge. For instance, in talking about
errors in effort reporting, most research administrators could easily cite examples of
heavy fines and penalties levied on research universities for failures to adequately
manage this responsibility. The recent, dramatic instances of settlements with the
government on effort reporting are convincing evidence of the need to provide
appropriate accountability. Most research administrators know that “seeing is
believing,” and firsthand observations are respected by others — particularly when
one observer’s experience confirms another’s. Personal anecdotes are very
persuasive.

◆ Authoritative sources can be powerful support for one’s position, but only if the
audience acknowledges the authority of the source. Authority can come from
expertise in a specialized field, from bureaucratic rank, from publications (manuals,
policy documents, etc.), or from legal governance (e.g., contracts). When necessary, a
research administrator should mention the reason for the authority’s stature. For
instance, in a letter to an institution’s chief executive officer, a biochemist, one may
find it necessary to explain “When Ted Kooser, the U.S. Poet Laureate, was awarded
an NEA fellowship, he wrote that. …”

◆ Metaphor implies a comparison between dissimilar ideas or things. By his famous
caveat “God does not play dice with the universe,” Einstein used a gambling
metaphor to refute quantum theory. Edward O. Wilson wrote that for scientists, “it is
better to have begun a great journey than to have finished it,” depicting scientific
inquiry as a voyage. In each of these examples, an economical metaphor condenses
the idea, intensifying its impact.

Metaphor is essential when a communicator must explain highly specialized ideas.
Many scientists face a public relations crisis outside their disciplines, because their
research cannot be comprehended by a layperson. For example, details of a quantum
physicist’s daily research are counterintuitive and beyond the scope of human
experience. To most people, it makes no sense that an electron can be in two
locations simultaneously. Since humans cannot “see” strings folded in eleven
dimensions, how can nonspecialists be stimulated to provide funding for string
theory? To communicate with outsiders, which scientists must do to engage the
public, they must find simple words, usually in metaphor, to express fundamental
principles.
◆ **Analogy** is also a kind of comparison, but a comparison between things that have some essential similarity. Because of the similarity, the comparison is direct rather than implied, and analogy traditionally uses the words “like” or “as.” Carl Sagan used analogy when he wrote that “Biology is more like history than it is like physics; the accidents and errors and lucky happenstances of the past powerfully prefigure the present.” Forrest Gump quotes his mother’s analogy when he says “Life is like a box of chocolates. You never know what you’re gonna get.”

◆ **Example** communicates a class by identifying an instance of the class. Clark Kerr, former president of the University of California, is an example of a forward-thinking academic administrator. Administrative costs are often examples of indirect costs. The Indian Ocean tsunami of December 26, 2004, is an instance of the effects of plate tectonics. Each of the examples above illustrates exemplification.

Often the most effective example is a story. Narrative — storytelling — is an especially powerful tool because it engages the receiver’s mind in a chronological, structured sequence. This inherently provides a recognizable structure. The narrative typically leads to a pointed conclusion, the climax of the narrative, and it typically features some person with whom an audience can identify. Stories often have an inherent element of play.

**Example**

There is a creative, playful aspect to scientific discovery. In an interview for BBC2 Television, Richard Feynman told a story that after he left the Manhattan project, he wanted to “play” with physics — to look into things for the pleasure of learning, rather than for some pre-mandated purpose. One day, as he was eating in the Cornell University commons, a young man’s dinner plate flipped up in the air and crashed. As Feynman “played” with that image, he realized that the plate not only rotated, but that it also wobbled. Then through research, Feynman learned that the plate spun and wobbled in a mathematically predictable ratio. Building on that playful research, Richard Feynman developed the theories that won him a Nobel Prize for quantum electrodynamics.3

This anecdote exemplifies the potency of stories. Even when communicating difficult concepts, narrative commands attention and helps embody the idea in images.

**Explanation of Inconsistencies: Accommodating Different Viewpoints**

Research administrators work in opposite domains: a world of policies and a world of liaisons. As the voice of policy, research administrators have little room for open-ended dialogue, for the nature of policies is to draw lines, to be definitive and authoritative. But as liaisons, research administrators must negotiate, find middle ground, and express sensitivity to alternative viewpoints. This latter role is particularly challenging in terms of communication.

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3Summarized from “Horizon: The Pleasure of Finding Things Out,” replayed on *Nova*. 

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Dealing with Skepticism. We live in a skeptical time and a critical culture. Michael Shermer, publisher of Skeptic magazine and founder-director of the international Skeptics Society, defines skepticism as “a provisional approach to claims.” Since evidence of some “truth” is always tentative, almost any claim is subject to challenges. Humans refine claims, in part, by testing them. Ideas about research administration are tested in many arenas, such as between OSP staff members and faculty, in conference presentations, and in discussions with federal agencies. The presenter of an idea should be ever self-examining, skeptically checking one’s work for accuracy.

Audiences are skeptical, too. Research administrators, as communication senders, need special strategies to overcome a receiver’s instinctive skepticism. Aristotle’s Rhetoric describes the impact of a speaker’s persona, which he called ethos. He describes ethos in terms of good will, good sense, and good moral character. For instance, when a sender communicates good will for the receiver — one kind of ethos — it can enhance the receiver’s willingness to listen. It is a tool to address skepticism.

Enhancing Credibility. Aristotle’s “good sense” is particularly important in professional interactions. A sender shows “good sense” by publicly identifying his own bias, by pointing out uncertainty in his own data or arguments, or by affirming an opponent. These strategies enhance ethos and credibility.

“Good sense” will help a sender disarm objectors, such as by qualifying conclusions. For instance, it is helpful to say, “I’ll point out some areas of concern about my concept,” or “there are two ways of thinking about this,” or “the old paradigm has merit, but new information should be considered.” In principle such disclaimers are effective tools in all communication. Bridging the gulf between farmers and cowmen, to use the earlier analogy from Oklahoma!, one must be careful to appeal to each without compromising either. Water diverted from the stream to irrigate crops should be supplanted by wells to nourish the cattle.

Socrates began his famous Apology, after which he was condemned to death, with the words: “I do not know what effect my accusers have had upon you, gentlemen, but for my own part I was almost carried away by them — their arguments were so convincing.”

In the U.S. Senate on July 29, 2005, Senator Bill Frist advocated a change in U.S. policy on stem cell research. Since his remarks represented a breach with the Bush Administration, he was careful to explain his reasoning and to express respect for President’s Bush’s viewpoint:

On August 9, 2001, shortly after I outlined my principles, … President Bush announced his policy on embryonic stem cell research. His policy was fully consistent with my ten principles, so I strongly supported it. It federally funded embryonic stem cell research for the first time. It did so within an ethical framework. And it showed respect for human life. But this policy restricted embryonic stem cell funding only to those cell lines that had been derived from embryos before the date of his announcement. In my policy I, too, proposed restricting the number of cell lines, but I did not propose a specific cutoff date. Over time, with a
limited number of cell lines, would we be able to realize the full promise of embryonic stem cell research? …

While human embryonic stem cell research is still at a very early stage, the limitations put in place in 2001 will, over time, slow our ability to bring potential new treatments for certain diseases. Therefore, I believe the President’s policy should be modified. We should expand federal funding (and thus NIH oversight) and current guidelines governing stem cell research, carefully and thoughtfully staying within ethical bounds.

In these remarks, Senator Frist was careful to demonstrate points of agreement between the administration and himself (“fully consistent,” “strongly supported,” “I, too, proposed restricting the number”), careful to use imagery consistent with the administration’s view (“respect for human life,” “staying within ethical bounds”), and careful to compliment the administration’s prior actions (“federally funded embryonic stem cell research for the first time”). Even the word “modified” represents a soft landing on the hot topic of change.

Senator Frist went on to encourage diverse views on this subject, advocating “serious debate,” and not only in Congress, “but across America — at our dining room tables, in our community centers, on our town squares.” He remarked that “We simply cannot flinch from the need to talk with each other, again and again. …” Such rhetorical strategies, advocating respect for diversity, are most useful when points of view are diverse and extreme.

In research administration, the sender may also need to address seeming inconsistencies that are based in institutional or sponsoring agency policy. For example, Office of Management and Budget (OMB) Circular A-110 allows universities to define “equipment” as an item with an acquisition cost of $5,000 or more. But a university may choose to define equipment at a lower cost threshold as part of its institutional policy on property management. That decision is still in keeping with federal policy, but recognizes that certain institutions may need a broader definition. A research administrator “sending” a communication describing “equipment” may wish to specify the definitional policy in order to avoid misunderstandings.

The widespread cultural bias to “test” claims means that any communication is subject to scrutiny. Wise communicators express respect for alternative perspectives. Wise communicators assess their own claims, looking for evidentiary strengths and weaknesses, and stand ready to support their viewpoints.

**Accommodating Give and Take**

Effective communication is a two-way street. The most effective communication builds on a reciprocal relationship between sender and receiver. Different people learn and communicate in different ways. The most effective communicators take time to understand the target audience, to monitor feedback from the receiver, and to adapt to the receiver’s preferred model.

Communication theory is closely related to theories of learning. Some people learn better alone, others through collaboration. Some learn better from verbal material,
others from visual material. Some prefer to deal with abstract ideas, while others prefer social-centered information. These same differences (and others) apply in the world of communication. They suggest that variety in communication strategies increases the probability of effective communication. Different constituencies will respond favorably to different media, so good communicators find diversity in the medium.

In particular, effective communicators know the value of asking questions and listening to responses. Raising questions and listening to the answers help guide the sender to creating effective messages. But they do more than that. Listening is an act of respect that also enhances the stature of all parties, building the interpersonal relationship between communicators.

**Working in Groups.** Groups are often more creative than individuals. Creativity theorists recognize that external stimuli, such as collaboration or friendly competition with partners, bring more ideas to the table. The adage that “two heads are better than one” is a demonstrable fact in many professional settings. Give and take between participants improves communications and enhances the likelihood of achieving positive outcomes.

**Importance of Repetition**
When “receivers” perceive the same message repeatedly, their minds move the information from short-term to long-term memory. Repetition of a message causes the brain to literally build new connections between synapses. The following old speech teachers’ adage applies to all communications:
(1) Tell them what you’re going to tell them.
(2) Then tell them.
(3) Then tell them what you told them.

An effective communicator states the message, then repeats it, then repeats it with variation, then repeats it again for good measure. Remember the three principles of selling reality: “location, location, location.” In a famous address in the darkest days of World War II, Winston Churchill told the students of Harrow —

[T]his is the lesson: never give in, never give in, never, never, never, never — in nothing, great or small, large or petty — never give in except to convictions of honour and good sense. Never yield to force; never yield to the apparently overwhelming might of the enemy. [Emphasis added]

**Identifying Outcomes.** One special kind of repetition is a fundamental tool in outcomes teaching. Students tend to respond positively when the outcomes of their lessons are made clear at the beginning of a learning session. Thus teachers often say to students “At the end of this class, you will be able to [list and explain the principal dynamic factors in the Gunpowder Plot] or [play a chord on the cello] or [determine the allowability of participant costs].”

In a similar way, communicators wisely identify the goals of a meeting. Thus one may hear “at the end of this meeting, we’ll have an action plan” or “I’d like us to name
some ways to … “ or “before we break, everyone should know exactly what his or her responsibilities are for this project.” In essence, identifying outcomes for a meeting is the first step in a series of repeated statements. The most successful outcomes tend to be statements of behaviors, of physical actions. They function for meetings like a salesman closing the deal: they lead to action.

Research administrators should develop individual habits of stating outcomes. At the beginning of a meeting, the goals should be articulated. At the end of the meeting, the conclusions should be reviewed, achievements pointed out, and homework assigned.

Ensuring Successful Communications

To achieve one’s highest potential as a communicator, one must work at communications. It is a worthwhile adventure. In The Future of Leadership, Warren Bennis called communication “the most important leadership skill.”4 Careers can be made or broken by the quality of communication. Generally those who master communications are regarded more highly by society. If someone cannot effectively communicate her contributions to the profession, how will others know her value?

Communication Skills

Communication skills require effort, but the results can impact one’s life dramatically. In Leadership Is an Art, Max De Pree wrote that “to achieve meaningful work and fulfilling relationships,” nothing is more important “than to learn and practice the art of communication.”5 To learn and practice — these are the keys to developing skills.

Communication success is both a factor of instinct and of cultivated skills. Good communication is the result of several “crafted” components including the following:

(1) Care in crafting the essential message, which involves

- knowing the subject and researching the problem as needed;
- finding a solution to the problem and recommending an action; and
- expressing the solution in attractive ways for the specific audience.

(2) Care in crafting the medium, which involves

- analyzing the audience’s needs;
- finding the medium or media that suit(s) the circumstances, message, and resources; and
- monitoring responses and adapting the message and medium accordingly.

Good communicators make certain models habitual. They habitually analyze the audience, habitually listen and observe feedback, habitually frame their messages appro-

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priately for the situation, habitually trim words to the essence. In part these habits come about through practice. One should be sure to practice a PowerPoint delivery, practice listening, practice repeating someone’s statement back to them, practice re-reading e-mails before transmitting them.

Good communications are artful. They condense complex materials into comprehensible forms. In place of chaos, they create knowledge. In place of inaction, they invite achievement. Mathematicians often appreciate the “elegance” of a mathematical proof, assigning to it a higher probability of truth than to inelegant formulae. Even the simplest directive or request can be artful.

505.6 Conclusion

The writer John Gardner, writing about endings in The Art of Fiction, said that “The novel’s denouement ... is not simply the end of the story, but the story’s fulfillment.” In professional communications, that fulfillment is some form of change.Professional communications may provoke thought, provide tools for achievement, or stimulate action. All good communications culminate in some change, fulfilling their purpose. Change is the purpose of communication whether it lays groundwork, establishes relationships, provides information, or commands assent.

Peter Drucker, one of the great teachers of management, wrote in Management: Tasks, Responsibilities, Practices that:

Communication ... always makes demands. ... It always demands that the recipient become somebody, do something, believe something. It always appeals to motivation. If, in other words, communication fits in with the aspirations, the values, the purposes of the recipient, it is powerful. If it goes against his aspirations, his values, his motivations, it is likely not to be received at all or, at best, to be resisted.

Research administrators should remember the following guidelines when preparing and delivering effective communications:

◆ Give thought to your communications.
◆ Study your receivers; reflect on your messages; and appeal to your specific audience: to their aspirations, values, and purposes.
◆ Build a bridge between “the farmer and the cowman.”
◆ Expand your tools of communication.
◆ Use all available communication resources to develop the territory of sponsored research.

Supplementary Material

This section includes expanded coverage of topics relating to communications — internal and external — in research administration. These materials are culled from a variety of authoritative sources.

An Approach to Negotiations*
Garry R. Sanders, The Research Foundation of SUNY

As a research administrator, you will negotiate thousands of times over a career. You may negotiate a FAR clause with a contract officer at the Department of Defense, or a publication clause with an industry attorney. You may negotiate with a faculty member over responsibilities in meeting a grant deadline. You may negotiate with your boss for an office with a window, or a higher salary, or flexible working hours. You will not negotiate as a lone wolf, but with your boss, colleagues, and other institutional experts in the background. Part of your job will be to keep those who need to know aware of the status of your negotiations.

There is no single technique or strategy to help one succeed in each of these scenarios and settings. Nor is there a trick or ruse that will yield success. There is, however, a recommended approach that will lead to success more often than not. The recommended approach begins with

◆ preparation
◆ knowing yourself and your goals
◆ knowing your negotiating partner and his or her goals
◆ communicating appropriately
◆ thinking and acting creatively and sincerely to accomplish the “best outcome”

Note: “Best outcome” does not mean absolute perfection. Think of this approach as a series of confidence-building events: confidence that you build within yourself and with your negotiating partner.

Preparation

Let’s say that you work for ABC University and you are asked to negotiate your first research contract and the contract is with XYZ Corporation. How do you prepare for this negotiation? What do you need to know?

A simple way to begin is by making a list of items to read and digest, and a list of people to talk to. Your reading list might include germane ABC University policies and processes (e.g., intellectual property, academic freedom, and indemnification). The list may include prior contracts negotiated with XYZ Corporation with a summary of issues and how these were resolved.

* This discussion is based on material presented at the NCURA Annual Meeting, October 31, 2005.
On your list should be the names and contact information of the relevant principal investigator and senior research team members, as well as the key contacts at XYZ Corporation. If ABC University has a standard research contract, read through it carefully, understand and practice stating in your own words and business style what each clause means. You will likely need to explain these clauses to your negotiating partner, so you might as well learn to do it readily and confidently. Your list of people to contact should include your boss, faculty member, and perhaps a peer or two at another university who has significant negotiating experience.

Prepare to manage the flow of documents, revisions, and exchange of information produced by a negotiation. For more complex agreements with multiple negotiating partners and goals, consider using project planning software to track milestones and timeframes to accomplish negotiation tasks.

**Know Yourself and Your Goals**

Each of us has a style of communicating and managing ourselves in business settings. If your style has been effective for you, then there is no reason to change your bearings for the purpose of a negotiation. If you do, you will not appear comfortable to the other party, and it will be more difficult for you to concentrate on the substance of the negotiation. Apply your style toward achieving your negotiating goals.

Ask yourself: What are my goals? Completing a research agreement that is consistent with university policies and provides resources to support a research program? Building a business relationship with a research sponsor? Perhaps all of these goals apply to the negotiation. Be sure you define what the key goals to accomplish are and identify the primary pitfalls to avoid.

**Know Your Negotiating Partner and His or Her Goals**

Negotiation is not mediation. You are not responsible for representing and advocating your negotiating partner’s interests. You are responsible for learning what those interests are, for asking appropriate questions to discern and clarify your partner’s goals and limits. For example, if during your discussions with XYZ Corporation about a budget for a research project, you learn that the company will not pay overhead (facilities and administrative expenses), it may be helpful to ask if the issue is the total costs, or if it is possible to list costs in a different manner or format, or to inform the company that the direct costs do not cover full costs of completing the project. You need to learn the company’s perspective and communicate that to your ABC University colleagues so your team can help you consider options to resolve the matter. (See Figure 520.1-1 for tips on achieving outcomes.)
Figure 520.1-1: Tips on Achieving Desired Outcomes

When setting desired outcomes, be sure
✓ Key interests of both parties are known and satisfied
✓ Criteria to judge options are known
✓ To remember: You’re setting the stage for a working relationship after negotiation is complete

To improve negotiation outcomes
✓ Define negotiating success
✓ Define roles
✓ Understand the other party’s interests
✓ Build the relationship

Communicate Appropriately

Many negotiations begin with a telephone call and then proceed immediately to a series of email communications. Others begin with email and communication continues electronically. Fewer begin as telephone calls and remain as verbal transactions. Whether communicating in writing or verbally, keep your attitude, words, and phrases positive and professional. Address your negotiating partner respectfully and graciously. Stay on point. Be on time for conference calls. If you say you’ll respond to a question by next Tuesday morning, then respond by Tuesday morning. A good practice is to summarize telephone calls with a follow-up email to your negotiating partner. These are all confidence-building steps that build your credibility as a negotiator and representative of ABC University. (See Figure 520.1-2, page 520:4 for tips on developing good negotiating habits.)
Accomplish the ‘Best Outcome’ You Can Achieve

Some negotiations accomplish quickly all goals set at the beginning. These are usually straightforward to handle: two or three emails, one telephone call, one party accepts the other’s contract template with a few variations and innocuous language changes. Other negotiations are more difficult to conclude: the parties do not agree on fundamental terms, such as intellectual property ownership or publications or budget. These negotiations can become protracted and simply stall. In such cases, continue to communicate with your negotiating partner, keep apprising your ABC colleagues of whatever progress and blockages have occurred. Always try to move the process forward. Seek the advice of institutional experts in the areas of dispute (tech transfer, general counsel, etc.) to garner more options and frame these new options to the other party. Always assess the willingness of your negotiating partner to reach an agreement.

Remember: Negotiate to achieve a best outcome, not a perfect outcome.

Figure 520.1-2: Tips on Fostering Good Negotiating Habits

- Be sure to do your homework
- Don’t treat money as the only important item
- Define communication paths
- Remain self-aware
- Recognize what you know and don’t know
- “De-brief” as you proceed
- Educate yourself on negotiation
Communicating With the Boss: Efficiency in the Land of Overwork*
Kim Moreland, University of Wisconsin, Madison and Kennis Wessel, Ph.D.

“BOSS.” The word, laden with implications, sounds harsh. We use it in such expressions as “boss around,” “boss man,” “check with the boss,” and “bossy.” Even the origins sound harsh, since “boss” comes from a Dutch word for “master” — and who among us hasn’t felt the pinch of being subservient to the boss?

A boss-employee relationship can be extremely complex. Stress is built into the relationship. But in order to minimize the stress and negotiate the complexity of the relationship, we must learn to communicate effectively with the boss. How does one do that? How does one bridge the power gulf?

In many ways, communicating with a boss is no different from communicating with anyone. Effective communication always requires understanding the content and character of the message itself, the purpose of the message, and the needs of the audience. With the boss, as with anyone, we must ask what our goals are with the communication, and, perhaps most importantly, what are the boss’s needs. Here are some simple recommendations to follow when communicating with the boss.

Keep Communication Professional

Relationships, including professional relationships, have an inherent personal component. Professional relationships are no exception, although they always balance toward business factors. In a professional relationship with the boss, always monitor the degree of personal information exchanged between you. Generally, it’s wise to let the boss take the lead in establishing the balance.

Even then, remember that the bottom line is always professionalism. Keep limits on personal information. And anytime you speak personally, be ready to cut it off and return to business. The professional obligation is the only constant in a boss-employee relationship.

Understand Your Mutual Needs

The boss and the employee have a symbiotic relationship. Each depends on the other. The boss needs information that is complete, accurate and timely. In the Office of Sponsored Projects (OSP), where information is specialized and highly technical, the employee may have skills or information that the boss does not, enhancing the employee’s value to the boss and the OSP team. Conversely, the employee depends on the boss for resources, interconnectedness to the university, to other agencies, and to the larger global picture. The boss and the employee hold a key to each other’s professional success.

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Organize Your Communication

Employees communicating with the boss should take care in organizing the communication. Bosses in the OSP are often under severe time pressures. To utilize time efficiently, the employee should prepare the message, at least mentally. First, state the central point before explaining it. Put the key piece of information in the lead position. For example, “There’s a question whether we’re in compliance with the NIH policy on human subjects,” or “Dr. Penoyer missed our deadline for Grants.gov submissions,” or “I have a family problem and I need to be out of the office tomorrow.” Second, be so prepared that you can state the essential content with maximum economy. Put the essence in a single, brief sentence. Third, provide supporting information as needed and at the boss’s discretion.

Anticipate the Boss’s Needs

When presenting information the boss has requested, the employee’s choices should be guided by the boss’s needs and by the boss’s preferences of style. Ask these basic questions:

- What information does the boss need to be effective?
- What calendar issues drive the boss’s need?
- What are the boss’s expectations about information provided by employees?

Before you meet with the boss, do your homework. Be thorough. Organize yourself by learning what the boss needs, and the timeline on which he or she needs it. Anticipate questions the boss may ask about presentations. Will the boss need financial data? If so, how much information and in what form? Will the boss need to read a section of a proposal? Have it available. If action is likely, anticipate implications of the information; or, if push comes to shove, what’s the fallout? For example, if the principal investigator won’t submit a Grants.gov proposal by the deadline, what are the workload implications for OSP staffers? Whether or not the boss asks for that input, you enhance your communication if you have possibilities in mind. If action is called for in a report, anticipate outcomes of the action.

In responding to the boss, be sure you know the boss’s style preferences. Does the boss prefer summaries or detailed reports? Should reports be written or oral? If the material is written, the boss has an opportunity to review at her discretion. If the material is presented orally, she can ask follow-up questions on the spot. Each style has implications for quantity of information you should include, for a timeline to prepare the report, and for the possibility that you must prepare follow-up reports. You may have to alter your own presentational preferences to suit the boss.

Know the Boss’s Managerial Style

Does the boss delegate or does she give directives? In general, the boss who delegates wants the employee to assume responsibility for problem-solving. A report to this boss should be relatively global and conceptual, featuring essentials only. The boss who issues directives is more likely a hands-on manager who wants details, and who will be actively involved in your daily decisions.
These style differences have implications for timing. The delegating boss usually prefers information on a regular meeting cycle, with the exception of special needs and crises. The directive boss wants information as it is available and wants to be involved in active decision making. Finally, some bosses listen passively as you present information, but others will be more proactive, asking for clarification and further details. Always know what your boss needs and be prepared to provide it.

Regardless of the boss’s style, be careful to suggest solutions without insisting on them. Remember that the boss has an obligation to run the office, so protect yourself by not taking decisions personally. And remember that the boss needs to hear all information, both good and bad. The boss cannot function, cannot properly act, when important information is withheld.

**Prepare Fully When Making a Pitch to the Boss**

When the employee is approaching the boss, these questions can serve as a guide:

- What do I need from the boss?
- To address my request, what information will the boss need from me?

If you offer a suggestion to the boss, prepare and organize. State the suggestion up front, then give justifications for making it. If background is required before you state the suggestion, keep it extremely brief. Always be prepared to discuss the downside of your suggestion — as well as the upside — and prepare for every question you can anticipate. Once you make the initial pitch, give room for the boss to respond. Follow the boss’s lead. It’s a good practice to keep yourself somewhat disengaged, rather than to become too ego-involved. The decision should rest with the boss, or you wouldn’t be presenting it to the boss in the first place.

In conclusion, communication between an employee and the boss is colored by differences in responsibility and authority. Each person is essential to the proper functioning of the office, and each depends on the other. It’s easy for an employee to see the boss’s dependence on the employee, but do not overlook your dependence on the boss. As an employee, work to support your boss, the office and the institution. To help your communication with the boss, identify the biggest issues before you, and solve them. That calls for each employee to work closely and collaboratively with the OSP team. As head of the team, your boss deserves your most careful and thorough communication. But remember that the biggest single reason people change jobs is not salary, not job descriptions — it is unhappiness with the boss.
Delegation: The Boomerang Effect?
Stacy A. Riseman, Franklin W. Olin College of Engineering and Michelle Joy Powell, Georgia Institute of Technology

When was the last time an employee came in with a question or a problem and somewhere in the process they left and we ended up taking on whatever it was? If the answer is “today,” then it might be helpful to learn more about delegation. It happens to all of us — the need to solve a problem that is brought to our attention. There are several reasons for why we do this. We think we could do it better and faster ourselves. We may not trust the person to do it correctly, the person isn’t qualified or trained, or better yet, the person didn’t handle it well the last time! And for every one of these reasons, why would we NOT take on the task? Anybody in their right mind would, right? At the time we think that we are saving everyone’s time by handling the situation ourselves, when in fact, the joke is on us. Well, maybe not the joke, but now THE TASK is on us!

So why is it sometimes difficult to delegate? Perhaps the act of delegation has more to do with ego than anything. If the person to whom we are delegating fails, it is a reflection on us. If the person exceeds expectations, then we may be upset for not doing it that way first. Not everyone feels the latter but one must keep in mind that when an employee exceeds, we are an effective manager. In this case, use that as an ego boost, rather than taking on every task. These situations are the minority. Many of us have the situation where we are afraid to delegate because we believe that the person to whom we are delegating to, due to past performance history, will fail. And when they fail, we end up cleaning up the mess. It’s much easier to “just do it ourselves” we think. It is harder to figure out WHY this keeps happening with that employee. And yes, unfortunately, that means more work for us. Figuring this out should only occur at the beginning of the process of delegation. Once we learn how to be an effective manager, delegation will happen, and the tasks delegated will actually get done, and to our satisfaction, if not exceeding our expectations.

So how does one delegate effectively?

◆ First, choose what to delegate and have a plan of action.

◆ Second, identify the appropriate person for the task at hand. Knowing our employee’s strengths and weaknesses ensures that the task is something that they can accomplish. Prepare that person for the task and make sure that they understand the scope.

◆ Third, communicate what needs to be done. Try explaining the what and the why. What does the employee need to do and why does it need to be done (why it is important)? It is important to share information like timelines, deliverables, background information, and any advice that is important to the activity. Also,

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consider who the employee should work with and what resources are available for them to successfully accomplish the task.

◆ Fourth, empower the employee to do the job properly. It may be necessary to back them up in disputes. It is critical to keep in touch with the employee and monitor their progress in accomplishing their task as well as supporting them. Gauge the employee’s feelings by asking how they feel about the project or how they plan on approaching the task. Then, yes, LET GO! It’s a scary process, but necessary in delegation.

◆ Finally, be sure to acknowledge a job well done. Give credit when the task has been successfully completed. Public recognition both reinforces the enjoyment of success and sets a standard for other employees. This last part is the perhaps the most important part of delegation. If a person is not acknowledged, how are they supposed to be encouraged to take on another task?

   Here are some tips to help delegate more effectively:

◆ Try not to underestimate your employee’s potential. If you expect the person to succeed, expressing this often, you will be pleasantly surprised more frequently than not.

◆ Keep lines of communication open at all times. If you let too much time go by, then the person will think that they are not a priority, nor the project.

◆ Keep your mind open to new ideas and ways of doing things. Your way isn’t always the only way. Projects are more interesting to an employee if they share in the ideas.

◆ Encourage feedback from the employee regarding the direction of the project. They are the one who is closer to the project and might be able to offer reasons why a project should take another direction.

◆ Delegation strengthens who you are as a manager. It shows you are an effective manager and can work together with your employees. This helps you with your promotion potential.

◆ Trust your employee and your intuition. Your employee will sense this and react accordingly.

◆ Give praise, acknowledgement, and feedback at the end of the project.

   Initially, delegating does take more time to master; however, the payoff in the long run is greater than the investment. The more often we use these skills and techniques, the easier they become.

   Eventually, delegating effectively will become second nature and more useful to us in our position. We will look forward to delegating because it will help free up more time to focus on the tasks we are responsible for, and haven’t had the opportunity to accomplish. Remember the job that we were hired for, but somehow found ourselves doing everything else? Sound familiar?
Recommended Reading


Managing ‘Difficult’ People At Work*
Rodney L. Lowman, Lake Superior State University

How does a seemingly mild-mannered employee become an unmanageable, angry monster? What is a manager to do with an employee who is unable to make a decision, leaving emails unreturned and accomplishing little for weeks at a time?

Both these cases are real, and both present serious challenges for any manager. In this article, I’d like to present some ideas for avoiding situations like these — if possible — and dealing effectively with “difficult” employees — when necessary.

Some days I feel like I have seen it all. I’ve been an academic department chair, dean, provost/vice president for academic affairs, and acting president. In October I become president of Lake Superior State University. I’ve also advised organizations on managing difficult employees at work. Consulting is much easier: I can give my advice and go home.

I have seen many articles and books on “managing difficult employees” or “coping with impossible bosses.” I have come to realize the interaction of person and situation matters as much in working relationships as in any other aspect of human behavior. There are rarely universals that make every employee difficult in every work situation. And the boss that some experience as the “worst ever” is experienced by others as their “best ever.” (Trust me on that one: I’ve been seen as both in the same organization, and sometimes, over time, with the same people!) And often, what seems to be a characteristic of a person is at least as much a characteristic of a complicated and too-stressful work situation.

Take the case of the angry monster. His behavior became increasingly difficult to deal with when his anger seemed increasingly out of control. When he stormed out of my office after engaging in a shouting match, he slammed the door loudly in front of others. I had no choice but to take action and did—not just because of this incident but because his behavior had reached intolerable and seemingly unchangeable limits. There were a variety of factors at work. The organization itself was under tremendous pressure—financial and otherwise—and this manager was in the middle of a vigorously contested divorce. Under less turbulent organizational times, the turbulence in his personal life would probably not have spilled over as much as it did into his managerial duties.

The indecisive administrator was also my boss, which made the situation even more difficult to resolve. E-mails were not returned, if at all, for weeks or months, yet there was a constant series of meetings that seemed unproductive and unhelpful. One of the main foci seemed to be on planning the next meeting. A number of the direct reports shared their frustrations, but few of us were willing to take the

* This article is reprinted from NCURA Magazine, September/October 2007, Vol. XXXIX, No.4, published by the National Council of University Research Administrators. It is used with permission of the publisher. Rodney L. Lowman, PhD, was a professor and past president of Lake Superior State University in Sault Ste. Marie, Michigan.
supervisor on. Those of us who did paid the price in terms of chilliness and lowered performance reviews.

In today’s world I’d also have to cite the “e-mail warriors.” These are the individuals who fight from afar by blanketing everyone in the university with their views. Inevitably some will latch on to the most extreme positions. Once started, such e-mail wars are difficult to end. And for the bright and articulate people who work at universities, the stream of words can be endless, if rarely productive.

An Ounce of Prevention
The most important part of managing difficult people effectively, I would argue, is not to get into the situation in the first place. This means rigorous screening up front, lots of reference checks, and interviews with more than one person in the office so there is some consensus on who is being hired. Better to hire a temp than a permanent employee about whom there are questions.

When I was a department head hiring faculty members, I always saved the envelope in which application materials arrived. Letters were almost always pristine and politically correct, but the envelope was often handwritten and gave some sense of how the person presented him- or herself when no one was looking. Think of the interview as a behavioral sample. Don’t just ask the usual questions about background, strengths and weaknesses and career goals in the customary tired way. Be indirect. For example, how would others describe your style as a worker or a supervisor? Also, create situations in which you can see how the person performs under stress. See how the job prospect handles being kept waiting, running over an appointed time, having the schedule for the day suddenly changed, etc. Interview behavior is usually well-rehearsed and well-practiced. You want to see how they respond in more spontaneous and ambiguous situations.

Pay Attention to Your Reactions and Those of Others
A potential hire should not be rejected because she or he reminds you of your difficult mother, but it would be important to figure out the source of the feelings you are experiencing. Do others have similar concerns, or are you experiencing an individual “red flag”? When in doubt, bring the person back for another round of interviews, do more reference checking, or just say no. You can choose your employees and get rid of those who are really ineffectual, but you are stuck with your clients, right? Well, not necessarily. I know of a number of consultants who have “fired clients.” They did so because the income, no matter how great, was not worth the trouble of the persistent and aggressive demands. Psychological health is often more valuable than money. Unfortunately, university administrators have fewer options, but you can manage clients by assigning ones you find excessively troublesome to someone else in the office. A client you find difficult may be no trouble to someone else in the office with a different personality or work style.

Some Courses of Action
We are all trained—at least to some extent—to avoid conflict, particularly when we are in a customer service or support function. Simple statements are a good place
to start, e.g., “I’m bothered that we are not seeming to give you what you need; I’m wondering how we can do a better job.” It’s usually best to start with the assumption that it’s easier to change your behavior than the other person’s. However, when difficult people remain difficult, it’s important to put the issues that are bothering you to them in as neutral a way as you can. “It seems that everything we have tried has not satisfied you, and my staff is finding it difficult to support your office. I’m wondering what we can do to change that.” Some difficult people may need less subtlety and may respond better to a more aggressive counterattack. For example, “You have asked us to drop everything for your last three grant applications, and we are not willing to do it anymore. We will work with you to plan your grant submission in a timely way, but if you give us any less than [fill in the blank] notice, we will have to say ‘no’ to your requests.” Of course, before you take such action, be sure you have informed your own boss of what you plan to do and why and have her or his support to do so.

Here Are Some General Suggestions to Follow in Dealing with Difficult People

1. You are paid to perform a job in a civilized society. You do not have to be badgered or bullied and should set clear boundaries about what you are willing and not willing to tolerate.

2. Gather data and study the problem before you draw any conclusions. Don’t be too quick to jump to conclusions. Check out your perceptions with others. Examine carefully the types of situations in which the behavior you find problematic is generally elicited. Make sure you are not the other individual’s “difficult person.” Try changing your own behavior to see if that makes any difference.

3. Talk to your organization’s professionals in human resources and organizational development (OD). How would they suggest you proceed? Ask them to bring in a consultant who specializes in this type of thing. Ask for a coach to assist you in dealing with the people you have otherwise been helpless to change.

4. Take action immediately once the pattern is established and you feel that you cannot — and should not — have to live with the situation. The longer you let a situation fester, the more difficult it will be to change later. Let the person or unit know what you are unhappy with and how you would like it to be different. Remind them every time the pattern repeats. Train the person or group that bad behavior has clear consequences.

5. Don’t be overly intimidated by power. We, most of us anyway, are programmed to say yes to those in power, those who can affect our futures. You can be cordial and generally supportive while also setting boundaries and limits.

6. Use humor. When a problematic person comes in to your office you can jokingly say “here comes trouble” loud enough for your subordinates to hear. They need to know you are sticking up for them when dealing with a bully.

7. If all else fails and you are stuck in an untenable situation, consider changing jobs or units. Let your boss (unless he or she is the difficult person!) know that you have had it with this behavior and you would rather leave than put up with it any longer. That sends a clear message and may get attention when other approaches have failed.
To Combat Claims, Take Decisive Steps
Report on Research Compliance

React quickly. Be pointed yet open. Respond in kind. And don’t forget to reassure your staff. These are the strategies that the Oregon Health & Sciences University (OHSU) employed when it was targeted by the animal rights group People for the Ethical Treatment of Animals.

Following a two-day inspection prompted by a PETA complaint, the U.S. Department of Agriculture informed OHSU — in a three-sentence report — that it found no items of noncompliance at OHSU’s Oregon National Primate Research Center.

But the efforts OHSU took before the inspection helped it weather the allegations in the public eye. PETA filed the complaint to the USDA on Nov. 13, 2007, detailing instances documented during a four-month undercover investigation of “sick monkeys who received inadequate veterinary care and pain relief; employees who chased terrified monkeys around their enclosures, capturing them and pinning their arms behind their backs to force them into transport boxes; and staff who sprayed water from high-pressure hoses into cages with monkeys still in them, leaving the animals wet and frightened.”

The organization posted videos of the primate center that were taken by a person affiliated with PETA, whom OHSU called an “infiltrator.” After learning of the allegations, Jim Newman, associate director for media relations, and his colleagues went into action.

“We immediately reviewed PETA’s claims and their video when we learned of the infiltration,” he told RRC. “We called a press conference for the media right after PETA’s press conference and invited the press to ask any and all questions they may have. We showed video of many of the same animals PETA made claims about. We also invited media into the facility and even offered free TB tests so they could have extensive access if they wanted.”

Many OHSU Staff Participated

The press conference “featured about 30 staff members from all levels of the organization, from the associate director to animal care staff who directly care for animals. One of the animal care employees who was targeted by PETA volunteered to take part and responded directly to their claims,” Newman said.

Within two weeks of receiving the PETA complaint, USDA performed a two-day inspection, visiting the primate center from Nov. 26–27, 2007. USDA issued the letter stating that no noncompliance was found on Nov. 29. OHSU posted the letter and a press release on its Web site. “We thank Oregonians for withholding judgment on
PETA’s claims until they could be reviewed by independent, unbiased animal care experts,” Daniel Dorsa, OHSU’s vice president for research, said in the statement.

Newman said, however, that, regardless of the “clean” report, “the toll on employees is heavy.” “Whenever claims like this are made, it hurts those who care for the animals because they are very dedicated,” he said. “Many of our employees came to the press conference because they were so hurt and angered by PETA’s claims.”

He added that much of the hurt was related to feeling betrayed by their former coworker. “They often get to know the infiltrators and are upset because [they] do not feel that the activists’ claims match reality. It is hurtful when someone who you considered as a coworker and friend portrays you as uncaring or cruel and is shown to not be who you thought they were,” Newman said. “We do have safeguards to make sure the people we hire are actually here for the right reasons. However, no system is perfect.”

PETA has targeted other universities that conduct animal research. Newman recommended that his approach be followed to minimize the impact on the institution and counteract PETA claims. “I think openness and willingness to talk about the work we do is the way institutions need to respond,” he said.
Leadership Tips: Modeling the Way

Danielle Woodman, Daemon College and Michael Wetherholt, Murray State University

Leadership, we concluded, is not the private reserve of a few charismatic men and women. It is a process ordinary managers use when they are bringing forth the best from themselves and others.

— James Kouzes and Barry Posner, The Leadership Challenge

Learning the traits and techniques of applying superlative leadership skills, as the Leadership Development Institute (LDI) Class of 2006 came to know them, was a fascinating journey of self-awareness, growth and camaraderie. As part of an effort begun by our predecessors in 2005, we hope to use this column as a way to share information on how to become better leaders in our profession of research administration. This month, we specifically focus on the first of Kouzes and Posner’s five practices of exemplary leadership – Model the Way. [For other articles in the series, see ¶¶520.7–5201.10.]

In 1983, James M. Kouzes and Barry Z. Posner sought to identify the practices of exemplary leaders. The two conducted surveys and in-depth interviews of middle and senior managers, and then analyzed personal best cases. They developed a Leadership Practices Inventory based upon this analysis, then asked over 3,000 managers and their employees to assess the degree to which the managers studied engaged these practices. Kouzes and Posner found that, regardless of variations in the industry or profession, good leaders exemplified what the two identified as The Five Practices of Exemplary Leadership®. These five practices include (1) Model the Way, (2) Inspire a Shared Vision, (3) Challenge the Process, (4) Enable Others to Act, and (5) Encourage the Heart.

The first practice of exemplary leaders is Model the Way. In describing this practice, Kouzes and Posner write: “Being a role model means paying attention to what you believe is important. It means showing others through your behavior that you live your values.”

As research administrators, we are often in the position of serving multiple constituents. Pre-award research administrators often work with program or contract officers, while post-award administrators may work with external auditors. Some of us have subordinates or an entire department to manage, and we all have supervisors. We have faculty members procuring grants for research, education, or public service. Other constituents are sponsoring agencies, including the federal government.

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In a microcosm, research administrators work with a wide range of constituents possessing different interpretations and expectations, not just of grant awards and the policies and procedures that govern them, but of our own roles as research administrators. With all these constituents, how do we ensure that we are paying attention to what we believe, and successfully show that we live our values without being chameleon-like, or alienating others?

Marcia Landen and Michael McCallister, who in 2006 wrote about the research administrator as a professional, speak to the core competencies and values of a successful research administrator. The authors’ analysis can serve as a foundation for defining our role and value systems as we fulfill our duties and responsibilities as research administrators. In their article, “The Research Administrator as a Professional,” the two wrote that

Successful research administrators must have an affinity for the creative process in a variety of disciplines, an acceptance for the mixture of ways research and its administration is done, and an appreciation for what constitutes a contribution to the field. Research administrators are brokers, translators, intermediaries, and helpers who value long-term process. But mostly, research administrators are believers in the vital importance of research.

How can the Landen and McCallister model be applied to our daily role as leaders? Being prompt for meetings, thanking others, and returning phone calls and emails promptly are basic examples of how we all can “model the way” to those around us. What about more difficult situations?

At the November LDI retreat, the Class participated in role play in which one person was a research administrator and the other was a kind, delightful, and highly successful faculty member. In this scenario, the faculty member had not met with the sponsored programs office to obtain an authorization on a contract. To complicate matters further, the faculty member had waived rights to the patent, and the university lost all rights and royalties as a result. This was not the first time an “event” of this type had occurred with this faculty member. But as leaders, how might we address this difficult situation without alienating the faculty member? As Kouzes and Posner note, we can begin by paying attention to what is important. For research administrators, what is important is the research.

A research administrator in this situation might begin by focusing on the value of research and his or her role in supporting the process. Contracts are necessary to ensure that the faculty member and institution are protected and that revenue promotes future research and the dissemination of results. All the constituents, from faculty members, staff, program officers and auditors, are striving to ensure that funds are procured and used wisely to advance research. When we are engaged in disagreements about procedures and policies, bringing the focus back to this fact will ensure the conversation does not become personal, will diminish the conflict, and will model the way for others to keep the focus off blame and on resolving the current situation.

Another important characteristic of leaders who model the way is their willingness to share information with others and guide them, rather than operating au-
tonomously. Landen and McCallister refer to successful research administrators as “… brokers, translators, intermediaries, and helpers who value long-term process.” Kouzes and Posner also identify exemplary leaders as those who model the way through long-term processes:

Because the prospect of complex change can overwhelm people and stifle action, they set interim goals so that people can achieve small wins as they work toward larger objectives. They unravel bureaucracy when it impedes action; they put up signposts when people are unsure of where to go or how to get there; and they create opportunities for victory.

Following Landen and McCallister’s definition of a successful research administrator and Kouzes’s and Posner’s definition of a leader who models the way, we can strive to interpret and translate. We can work with faculty members to explain the origin of a new policy or a change in a policy and to ensure that, in conversations, our staff, colleagues, and the faculty with whom we work fully understand the reason behind the policies and the information we are presenting. If staff members express frustration during a change, remind them of how far they have come. Celebrate small gains.

These are just of few examples of how we, as research administrators, can model the way.

**Recommended Reading**


Leadership Tips: The Visionary Leader *
Holly Benze, The Johns Hopkins University and Jackie Hinton, University of Utah

Effective leaders are not necessarily born. We become effective leaders through a continual process of self-study, education, and experience. Just ask any graduate of NCURA’s Leadership Development Institute (LDI)! In today’s article, we’re going to look at Visionary Leaders—the people who imagine the future, the ones who believe they can make a difference, the ones who see opportunities and recruit others to share in a common vision. But first, let’s talk about what leadership is. [For other articles in the series, see ¶¶520.6 and ¶¶ 520.8–520.10.]

Leadership is a process we use to persuade others to help us accomplish a common goal. Successful leaders apply their leadership qualities (e.g., values, ethics, knowledge, and skills) to achieve this process. As a manager or a supervisor, you have the authority to accomplish certain tasks. However, having authority doesn’t make you a leader; it simply makes you a boss. An effective leader differs from a boss in that he or she inspires people to achieve high goals, rather than simply telling them what to do.

To succeed, the Visionary Leader wears many hats such as the following:
◆ Coach – helping team members match their wants with team goals
◆ Facilitator – uniting diverse team members as a cohesive group
◆ Pacesetter – establishing challenging and exciting goals
◆ Director – soothing fears by giving clear direction in a crisis
◆ Democratic – encouraging unlimited participation

What makes people want to follow a Visionary Leader? People want to be guided by those they respect and who have a clear sense of direction. People want to be inspired in the workplace. When an employee or colleague is deciding whether he or she respects you as a leader, they don’t think about your leadership qualities. They watch what you do to determine who you really are. Based upon your actions, they decide whether you are trustworthy or self-serving, and misuse your authority. Let’s look at a situation that one employee encountered when starting a new position for a large pediatric department.

Although current employees were aware that someone was being recruited for the new position, they did not know why the position was created, how it would help or hinder their jobs, or how reporting lines would be affected. After being hired, it was announced that Susan would have the lead for electronic submissions to Grants.gov. Up to that point, almost all physician-scientists were accustomed to

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submitting hard copy NIH proposals.

The Challenge

How to build trust with potential colleagues who were wary of a non-clarified position, held by a new member of the research team, who was telling them that, in the near future, all of their clinical research projects would be submitted to NIH by the Sponsored Projects Office. Here are some tips that Susan discovered about how to be an effective Visionary Leader:

Risk yourself. Answer questions honestly and be willing to learn from others. Susan was hired to centralize a grants resource unit under the Research Enterprise and to define the grants process for a department of over 500 employees. Although she was expected to lead this effort, the first step to enable leadership was for her to become the trainee. She had to first listen and to learn to lead effectively.

Get to know the people and the culture. Meeting people face-to-face in informal settings is the most effective way to get to know them and what motivates them. Listening to their stories will help you identify people that will potentially advance your vision by helping you discover common visions. The approach you use when trying to effect change is critical. For example, simply telling people what they need is ineffectual and creates distrust. By listening and learning first, Susan was able to focus on how to fill the gaps in grants services and to show appreciation to others for what they did for the grants process.

Envision the future. Look back at lessons learned from the past to help you look to the future. Communicating a clear vision makes it easier for people to sign on. Susan was able to use this information to integrate her past experiences with her current situation to create a clear, focused vision for the future. Do what you say: although Susan was hired to be the grants resource expert, she was new to the medical field. She had to be willing to say “I don’t know, but I’ll find out.” To build trust, it was vital for her to follow-through on every request as accurately and quickly as possible.

Engage others in your vision. In this case, stakeholders were the best source for learning what help was needed to further the grant success of the young physician-scientists. Susan began “sharing her vision” by helping others imagine what could be, especially how they could improve success rates for grants. For example, Imagine a One-Stop-Shop that will smooth the way for…Imagine a resource team that anticipates investigator needs…Imagine a research environment that enables…Imagine that we can make this happen!

Language makes a difference. Using words to paint a picture helps others see new opportunities for improvement. Susan’s enthusiasm for her vision created a sense of excitement and opened the door for others to express their ideas. Her willingness to share her vision encouraged others to buy in to a project with the potential to make their jobs easier and improve grants performance within the department.
The words a leader uses also help build trust. The following quote by an unknown author serves as a reminder of words that are important for employees to hear.

The 6 most important words: I admit I made a mistake.
The 5 most important words: You did a good job.
The 4 most important words: What is your opinion?
The 3 most important words: If you please.
The 2 most important words: Thank you.
The 1 most important word: We.
The least important word: I

— Author unknown

Sharing the vision changes the vision. To draw people into a vision comes at a cost; a cost that ensures success. Susan had to learn who her constituents were and how to speak their language. What began as “my vision” emerged as “our vision.”

In summary, your leadership is everything that you do to affect your institution’s goals and the well being of others. Respected leaders concentrate on who they are (beliefs and integrity), what they know provide direction). People want to trust that their leaders understand their needs and have their interests at heart. They want to know that the dream is for the common good. The Visionary Leader’s belief in and enthusiasm for the vision is what inspires others to join. The most effective Visionary Leader uplifts people’s spirits. He or she encourages and inspires people to strive to be better than they are today.
Leadership Tips: Challenging the Process
Sara Clabby, Northeastern University and Tammy Raccio, Yale University

Our leadership series continues with Kouzes and Posner’s third practice of exemplary leadership—Challenge the Process. [For other articles in the series, see ¶¶520.6–7 and ¶¶520.9–10.]

Kouzes and Posner assert that “you search for opportunities by seeking innovative ways to change, grow, and improve; and, you experiment and take risks by constantly generating small wins and learning from mistakes.” To remain successful in the current stagnant/declining research funding environment, institutions must be willing to challenge existing practices. We are doing more with less. Institutions able to challenge existing processes and embrace ensuing changes will be better prepared to succeed in today’s uncertain funding climate. Let us explore how the six steps in challenging the process might help increase your sponsored program success.

1. Check for Limiting Assumptions. When we search for innovative ways to change, grow, and improve, we may be stymied by our “limiting assumptions.” That inevitable list of “we can’t do this because: we don’t have enough staff; we’ll never get buy-in from faculty and/or senior university officials; our systems cannot handle this type of change,” and so on. To move forward, we must identify the statements that are true and unchangeable and the statements that can be challenged. What if we used the list to generate new ideas that transform “limiting” assumptions into “boundless” opportunities? How can the sponsored projects office respond to the increasing need for their services with its limited resources? Can we creatively take a list of “cannots” and turn them into opportunities that will challenge the status quo? Can we cross-train existing staff to cope with potential catastrophes? How can we assist faculty, especially junior faculty, in an increasingly tight funding environment? Can we use a “train the trainer” model to develop department or college-level research administrators, using existing staff?

2. Look Outside. In research administration, sharing innovative ideas and best practices is the norm. Relying on colleagues within your organization and peer institutions can be a great source of creative inspiration; looking to other organizations and industries can also provide inspiration. Consider approaching faculty or departmental staff for suggestions on what you and your team can do more effectively. What about other departments on campus? Do they have a process or service that could work in your environment? For example, to be more responsive to requests for assistance from faculty and staff, a department may implement a

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helpline using the same software as the university’s Information Services’ Help Desk. The caller to the helpline receives a remedy ticket and the appropriate staff member responds to the ticket as quickly as possible. Once the question is answered, the ticket is closed and an e-mail is generated to the original caller. The software allows tracking of responsiveness and an opportunity to increase responsiveness because there is measurable data to build upon.

3. **Innovate and Create.** Behind every limitation lies an opportunity waiting to be discovered. Encourage people to think outside the box and discover new ways to approach obstacles. Look for innovative ways to make meaningful changes that challenge you and others. As an innovative leader, don’t be afraid to volunteer and become involved with a difficult job. This will test your limits as you share new challenges and opportunities with people on your team. If you are not having fun doing something, others are not either. Since people perform best when they enjoy what they do, try to integrate fun ideas into your organization’s work. People who have not been asked for their opinion often thrive when given the chance to contribute.

4. **Check the Fit.** Get to know the people you lead. Learn their skill levels; discover what motivates them; and encourage each person to contribute to the success of a project, maintaining a sense of its urgency. When a project is finished, celebrate the victory and don’t forget to renew the team before the next project! Don’t just celebrate the big win - a finished successful project - celebrate the small wins. Let the team know they are valued by recognizing the day-to-day successes. Teams get stale and need to be refreshed. Send team members to a professional meeting, rotate members on teams, or make sure members stay connected with other areas of your organization. Your commitment will help ensure that team members maintain the vision and values of your organization.

5. **Take the Initiative.** As a leader, be proactive about taking risks. Take the initiative and challenge the status quo. Find something that you believe in, that plays to your strengths and gives you a chance to stretch. Make sure the opportunity is in line with the organization’s vision and goals. Then go for it! Voluntarily place yourself in a difficult situation and look for ways to celebrate the small wins. Admit your mistakes and keep the environment safe for others to join in and contribute. Just because something has always been done a certain way doesn’t mean it stimulates creativity and innovation. If something you and/or your team tries does not work, stress the positive gains. Show that you value the creative attempt and learn from the process.

6. **Encourage the Initiative in Others.** Encourage others to question and take risks. Create a safe environment for them to speak up if something doesn’t seem right or they have a new idea. Organizations thrive when its employees are willing to be catalysts for change. Leaders need others to succeed! Model the way forward by helping others see opportunities in limitations. Opportunities can be achieved when others say “I will do that; we can make this a reality; it’s not a problem for us.”
We’d like to challenge you to eliminate the negative and search for opportunities that will strengthen your organization in today’s difficult environment of flat/reduced federal funding. Look for innovative ways to change, grow, and improve the practices in your office. Take steps to challenge the process. Generate the small wins and value the process.
¶520.9  **Leadership Tips: Enabling Others to Act**  
Chris Green, University of Texas Health Science Center at San Antonio and Tammy Raccio, Yale University

As we continue with Kouzes’ and Posner’s fourth practice of exemplary leadership — Enabling Others to Act — we will review some leadership fundamentals. Enabling others to act involves fostering collaboration where creating a climate of trust is essential. [For other articles in the series, see ¶¶520.6–8 and ¶520.10.]

Successful leaders have demonstrated the importance of trust and collaboration in improving team performance. They have shown that team goals are met because of collaborative rather than individual performance. In research administration, challenging situations often arise with a great deal of urgency. Success is more likely assured when they are able to work in a climate of trust, acknowledge interdependence among team members, and support face-to-face interactions. Learning how to assess the needs and requirements of your team so that they can develop these elements will enhance collaboration and improve overall performance.

*Creating a climate of trust* is the primary competency if leaders are to enable others to act. Effective leaders must make a conscious effort to develop and sustain trust among team members. People are more willing to risk being innovative and creative when they feel trusted. As leaders, we must first have trust in others. Although you may feel vulnerable and uncomfortable at first, the rewards of developing a high-trust group will enable your employees to grow and prosper. Employees experience more success as a group, more personal satisfaction and higher levels of commitment to excellence.

*Acknowledging interdependence among team members* is the second component in fostering collaboration and enabling others to act. When a sense of interdependence exists, we tend to rely on each other. Genuine teamwork enables extraordinary achievements that could not be accomplished individually. An understanding of mutual dependence is essential for success in the research administration environment. Interdependence among team members also involves reciprocity. A readiness to be cooperative, and not take advantage of others’ willingness to share, is a very successful approach to achieving collaborative goals. The risk of escalation is minimized with reciprocity. In addition, when people know you’ll reciprocate they’re more likely to cooperate with you and become a recipient of your cooperation. It’s a win-win situation. Highly collaborative people tend to be team...
players who get more pleasure from the group’s success than their own individual achievements. Emphasizing the long-term goals of the group can help strengthen the team and enable them to continue during temporary setbacks.

**Face-to-face interaction** is the most powerful competency in fostering collaboration and enabling other to act. It is extremely valuable for us to intermingle and have team members associate with internal and external contacts. Positive face-to-face communication promotes relationships that will have a positive influence on tomorrow’s dealings. If we can approach face-to-face interactions with the assumption that we’ll be working together in the future, building a good relationship will be mutually important to everyone on the team. Expanding our network of collaborators increases our opportunities for success. Nurturing these relationships and investing time and effort in building new relationships enables us to accomplish extraordinary goals. Staying connected to people that we deal with on a regular basis will keep us engaged. In today’s world, it’s more difficult to maintain face-to-face encounters where we try to build many of relationships by a click of a mouse and the stroke of a key. Leaders must remember—as we build trust, virtual trust doesn’t really exist. As with many aspects of research administration, we must balance our use of technology with the human contact—a balance that is vital to building effective teams. One way we achieve this balance is by sharing resources and information. When team members share a common goal and are committed to seeing it achieved, they are willing to share the necessary resources to make it happen. Face-to-face interaction requires a level of social competency. Social awareness and social skills must not be underestimated. Building strong relationships and working well with others will have a direct impact on your organization’s future successes.

NCURA members have an advantage. Many of us understand and practice Kouzes’ and Posner’s leadership pearls and many of our colleagues are successful leaders who model the way. Our collaborators have established trust with each other and often turn to their peers for suggestions on how to approach issues at their home institution. NCURA also exemplifies reciprocity with various training opportunities and mechanisms for exchanges of ideas. Attendance at the regional and annual NCURA meetings attests to the value we place upon face-to-face interactions in today’s virtual workplace.

In summary, allow yourself to reflect upon the competencies we’ve discussed and look for ways that you can enable others to act that will improve your chances for significant results. For example, managers can create a climate of trust with their fellow employees by encouraging them to work on special projects that will enable them to learn and grow. Interdependence can be accomplished during proposal and financial reporting deadlines by sharing a common set of goals. Lastly, foster collaboration by phoning rather than relying on email. Face to face or verbal interaction is still the most effective means of communication.
Leadership Tips: Encourage the Heart
Jeanne Galvin-Clarke, University of Maryland, Baltimore and Sinh Simmons, University of Washington

In this issue, we come full circle in our journey through “The Leadership Challenge” by James Kouzes and Barry Posner. [For other articles in the series, see ¶¶520.6–520.9.]

We have learned that a successful leader models the way by demonstrating the values that form the foundation of a strong organization. An effective leader articulates a vision that guides and energizes the team. He or she challenges the status quo to create new solutions to old problems, and enables others to act by fostering an atmosphere of trust, credibility, and support. A good leader brings all of these skills together when he or she encourages the heart, recognizing the contributions of individuals and celebrating the values and victories of the team. Adapting these leadership practices to your research administration office will improve the cohesiveness, self-motivation, and productivity of your staff. As international research administration becomes more common, effective leadership skills will impact significantly our ability to teach and to learn from our colleagues in foreign countries. Our ability to genuinely encourage the heart will strengthen our efforts to build new relationships. Let us look at ways we can encourage the hearts of others.

Expect the Best. Expectations can color outcomes. If you expect someone to fail, your non-verbal communication may express doubts that can become self-fulfilling prophecies. Instead, why not use expectations to help your team achieve success? You can shape your ideal team by envisioning what they can be and sharing your expectations with them. Positive expectations are infectious. As you model this orientation, you’ll find that team members will expect the best from themselves and each other, achieving common goals where everyone wins. This practice reinforces your efforts to enable others to act and expresses your commitment to their success.

Provide Clear Standards for Values and Goals. People perform better when they believe what they do is important and understand how it affects the whole. It gives

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* This article is reprinted from the NCURA Magazine, Vol. XXXIX, No. 5, December 2007 / January 2008, published by the National Council of University Research Administrators. It is used with permission of the publisher. Jeanne Galvin-Clarke and Sinh Simmons are alumnae of the LDI Class of 2006. Jeanne Galvin-Clarke is Manager, Internal Training and Administration, Office of Research and Development, University of Maryland, Baltimore. Sinh Simmons is Associate Director, Office of Sponsored Programs, University of Washington.
purpose to their actions. To keep a team motivated and engaged, it is vital that they receive useful feedback. People want to know if they are making progress towards a goal. Encouragement from the team leader lets them know whether or not they are on the right track. When team members believe that a leader wants them to be successful, they are more likely to be open to suggestions for improvement, strengthening the trust between leader and team member. As Kouzes and Posner point out, “with clear goals and feedback, people can become self-correcting.”

**Pay Attention.** Practice caring by walking around (Kouzes and Posner’s twist on the phrase) and catch people doing their best. Encourage team members to notice and acknowledge the contributions of their teammates. For example, Kouzes and Posner tell of a manager who issued “Gotcha Certificates” to each team member, managers and staff alike. Each certificate was valued at $5, redeemable at a local coffee bar. When someone on the team became aware of a co-worker who made an extra effort or accomplished a small victory, he or she would call out “Gotcha” and make an impromptu presentation of a certificate. The surprise and public acknowledgement of that moment packed a lot of punch for only 5 dollars. Make encouragement and recognition part of your team culture.

**Personalize Recognition.** To preserve trust and credibility, recognition must reward behaviors that exemplify the team vision and actions that support the team goals. People know when recognition is perfunctory. In lieu of the nebulous “employee of the month” award, specifically recognize the professionalism of the person who remained calm and courteous when faced with a demanding PI and a last-minute proposal. To be memorable, recognition must be personalized to the individual. NCURA demonstrates the power of recognizing and honoring individual achievements. Rather than receiving a plaque and handshake alone, recipients of the organization’s most prestigious awards stand on stage while the audience views a brief, personalized video of each recipient’s accomplishments. This approach is much more meaningful for the award recipients and personifies the values and skills respected by the NCURA membership.

Leaders learn from the many small and often casual opportunities to get to know their team. Make the effort to design recognition that individuals will appreciate. For example, one employee may like to have his or her successes written up in the office newsletter, while another may prefer to receive a hand-written note of thanks. One person may like to be taken out to lunch; someone else may prefer to have an extra hour off one day. Recognition doesn’t have to be formal or conventional, just meaningful.

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**Celebrate values and victories by creating a spirit of community.** Celebrations serve a dual purpose: to honor achievement and to remind everyone about the history and values that bind you together. Group celebrations bolster employees’ spirit. They provide opportunities to reinforce the values you want integrated into your organization and recognize progress toward reaching the vision you have set-forth.
Schedule Celebrations. Schedule celebrations so that they become rituals within your team culture. For example, host a celebration when the institution’s annual report is released to show the contributions sponsored programs make to the overall health of the institution. Remind your team that it is their efforts that made that possible.

Show Passion and Compassion. Celebrations for individual staff achievements remind employees that you value them as whole persons, not just for the work they do. Various celebrations such as birthday rituals, completing an advance degree, and farewell celebrations for colleagues who are promoted to new positions, reinforce the sense of community and connection between team members. Similarly, expressing compassion when team members suffer a personal loss or difficulty is equally important to building a sense of interpersonal connection.

Be a Cheerleader for Your Team. It is important to promote your team’s contributions to the institution’s success across campus, communicating the value of your staff to the institution’s mission and demonstrating your pride in their efforts. For example, you can highlight successes in your campus newspaper or add a “kudos” section to your sponsored research office website. Let your team know when you speak up for them before higher management. Show them the PowerPoint presentation you are going to present at the Dean’s retreat and don’t forget to ask for their input in that report.

Share Stories About Your Team. Telling stories about your team builds a sense of belonging to something important. Tell stories of individual team members who have demonstrated the values that underlie the work you do. For example, tell the story about the administrator who went out of his way to help a new faculty member identify a funding opportunity. Or, the story of a grants and contracts specialist who made sure a grant application was completed even though the due date was the same week her first son was born. These examples illustrate your office staffs’ dedication to serving its customers and the mission of the university. Tell the story about how the contracts your office negotiates lead to specific new technologies that saves lives. Telling stories enables your staff to feel proud of the roles they play as partners in the institutions’ research mission.

Have Fun. Be creative in your celebrations. Implement a water balloon throwing contest at the annual office picnic; dress up as Glenda the Good Witch or one of the Ghost Busters to hand out annual recognition awards. NCURA often reminds its members to enjoy the fun side of our profession. Remember the Blues Brothers and Blues Sisters who join the Soul Source and No-Cost Extensions band at the Tuesday night parties? The “man-on-the-street” interviews asking “What is a research administrator?” could have won an Oscar for best comedy short. Involving humor in your organization’s culture builds camaraderie. During an annual luncheon, one university had each of the central administration departments present a skit to illustrate what they do. The theme of the sponsored research office’s skit was
“1-800-SIGN THIS.” Working together to write the skit was as much fun as performing it, and the experience created a memory that continues to bind them together.

Encouraging the heart of your team is the exclamation point that emphasizes the value of each team member’s contribution. It is a visible symbol that publicly marks team efforts and stores memories in their hearts. Our deadline-driven, compliance-oriented jobs create plenty of stress for everyone. Reinvigorating their hearts with recognition and celebration will help your team balance that stress and encourage them to excel.

The LDI Class of 2006 invites you to enhance your own leadership journey by integrating Kouzes’ and Posner’s five leadership practices in your daily work. You will discover that your newfound leadership skills will increase cohesiveness and self-motivation among your team, improve productivity for your institution and provide a greater sense of satisfaction and purpose for you as a leader.
1520.11  **Good Time Management = Good Stress Management**
Jennifer Shambrook, St. Jude Children’s Research Hospital

There is a growing mountain of evidence which lists the associations between high levels of stress and chronic disease. By chronic disease, I’m not just talking about persistent dull headaches, or even throbbing migraines. However, there is a link there. Nor am I talking about recurring redness, swelling and itching of hives. Again, the link exists. Or neck and shoulder pain, or acne, or diarrhea or hair loss … although all fall into the category of being potentially stress-induced. No, what I’m talking about are the things that can cut our lives short by decades. Stroke, coronary heart disease, hypertension, some forms of cancer, and severe depression, that’s what I’m talking about. The leading causes of mortality in the U.S. today. I’m serious as a heart attack here (sorry, couldn’t resist).

We work in a profession that is deadline-driven, where we often have little control over our workloads (such as those last minute proposals). We thrive on playing our role in the advancement of human understanding of the mechanics of our bodies, our planet, or our universe. We must remember, however, we have chosen to devote years of our professional lives to this activity, not to forfeit years from our lives because we didn’t manage our stress properly. Stress in this profession is a given. It’s there, it’s not going away. However, by incorporating some time management activities into our individual lifestyles, we can reduce some unnecessary stress through prioritizing, planning and organization.

**Prioritize**
This needs to be done at both a micro and a macro level. Prioritization of your own big picture takes some quiet time and soul searching. What do you want? Do you love your job and want to be the best you can possibly be? Do you see this as a stepping stone to something bigger and better? Do you hate it and feel trapped or resentful? Once you set your priorities at the macro-level, it is important to set your daily and weekly priorities in tune with your own big picture.

**Consider Using Electronic Tools**
We have some great electronic tools available to us that are surprisingly not often used. Two absolutely essential tools are task lists and calendars. An electronic task list can help you set daily and weekly priorities. For each task, I make a quick little list for everything that needs to be done concerning the task (i.e., find a policy; draft an email; compile mail list; send for approval; disseminate information). This organizes my thoughts, breaks down the task into manageable parts, and helps me to jump back into something when I am interrupted. Using the task list is also an aid for fighting procrastination. For example, if a meeting ends 20 minutes early, I have a few unplanned minutes that can be used for something productive. By scanning the task list, I can quickly identify a task that I can either complete, or make some

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progress upon. Finally, when it comes time for a meeting with your supervisor, you can show them exactly what you’ve done and what progress has been made on your open tasks.

One last thing on the task list: For it to truly be an accurate reflection of how you spent your time, you do need to put unexpected tasks on it. Someone from campus royalty asks you for a report. You drop everything and work on that for the next three hours. This means that the items you had originally planned to work on are not done when expected. Put it on your task list.

Do the breakdown in the notes section, so you can organize your thoughts in how to attack the task, or explain to anyone else what was entailed in preparing the report. (“What, do you mean you can’t just press a button?”)

The electronic calendar can be Nirvana in a work environment when everyone uses it consistently. Years ago, I kept my calendar posted on my door. Now, I just make my calendar available to the people that need to see it. They can see where I am and when I will return. Of course the calendar is used for scheduling meetings, but I also block out time to work on my task list items. Without that, you may find others can rapidly gobble up every unscheduled moment of your day. It also helps you give better estimates when guessing turn-around time for projects you must give back to others.

Look at your task list and calendar as the last item of business each day. Review what you have accomplished, or left undone for the day. Set or revise your priorities for the following day. Denote top priorities on the task list. Schedule time for completion on your calendar. This will both help you realize the accomplishments of the day and prepare you to begin the following day at a high level of productivity. These activities can assist in lowering your stress. You can see what you have done, can do, and where you may need to ask for help.

The Task List and Calendar are extremely valuable tools for both organization and prioritization. If you are not using them now, I encourage you to try for six weeks and see if you have forgotten small tasks less frequently, kept a better record of how your day was spent, increased your productivity, given better customer service and lowered your overall stress.

**Avoid Time Bombs**

Here’s a cosmic truth: Almost EVERYTHING takes longer than you think it will. If it didn’t, you probably left out a step or forgot to get someone’s permission. And of course, getting with that person, explaining it to them, getting their buy in after you think the task is near completion can be significantly stress producing. Being aware that things usually take longer than anticipated is worth bearing in mind when you contemplate volunteering for anything.

If you have considered the time bombs and still want to volunteer to head up the fundraising drive party planning committee, or writing the department newsletter, there are a few things you might want to consider. Can the task be divided between people where you lead a task force, rather than doing it all on your own? Does your immediate supervisor see this as a valued activity?
Does this activity align well with your personal and professional priorities? Is volunteering for this particular activity a strategic decision, or just an impulse? Have you broken down the task into parts as it would appear on the notes section of your task list? Can you see where you would schedule the activities involved in completing the task on your calendar? If you review these things and the answers are looking pretty unfavorable, then perhaps you should decline the “opportunity.”

Keep a Time and Stress Journal

It is hard to modify what has not been identified. For just a few days, try to jot down things that make you feel either stressed out or waste your time. For example, if someone keeps you on the phone too long repeating themselves over and over, note that. If someone drops by your office to tell you about their vacation for 20 minutes, log that. How many “touching moments” or “thought you’d find this funny” emails are you getting in a day? (And if you get one that’s supposed to be forwarded for good luck, PLEASE don’t forward it to me! I feel lucky when I don’t get those things!!) In just a few days, you will see where the time wasters might be lurking. Each person’s journal will be slightly different. There will likely be a pattern of repetitive occurrences that suck productivity out of your time... and ultimately, add to your stress. By identifying these productivity parasites, you can develop a plan for minimizing or eliminating them.

Plan for a Healthy Lifestyle

A healthy lifestyle is another factor that can increase your productivity and reduce your stress. Substitute a half hour of television or reading for a half hour of exercise. Get an MP3 player if you have to be constantly entertained. It makes the exercise more fun. Keep healthy food at your desk. For those days when you don’t get to take lunch, a can of soup, or some dried fruit can be a lifesaver and keep you away from the vending machine. Obtain or maintain a healthy body weight. Finally, get enough sleep.

To do these things, you are going to have to extend the prioritizing, organizing and planning to your personal life as well. But we don’t live compartmentalized lives. To live a holistic healthy lifestyle, we must set priorities for health above convenience. In our profession, where we might be sedentary for eight hours a day, it is essential. A healthy lifestyle is a major contributor to stress reduction. And contrary to what seems logical, scheduling a half hour of physical activity gives us more energy. It also gives us sharper minds and a more positive attitude.

So, prioritize, organize and plan your way to a longer healthy life through stress and time management.
Bridging the Gap: Communicating News and Policy Changes from a Central Financial Research Administration Office
Kerry Peluso, Emory University

One of the most commonly heard challenges faced by financial research administration central offices is the challenge of communicating policy changes and other information across their campuses. One of the most commonly heard complaints from non-central research community members is frustration with a lack of communication and too limited involvement with policy changes and decisions made regarding research administration policies and procedures. Those involved in both central and non-central research administration offices are busy and generally work in stressful, deadline-driven environments. As everyone struggles to keep up with the changing requirements, tight deadlines, and increasing reporting and compliance requirements, communication can often take the back burner to more pressing issues. The unfortunate result of this situation is that the volume of issues and challenges experienced by all is multiplied.

Beyond this, many central offices struggle with how to reach those they need to communicate with. There are a multitude of methods used for communicating within a university. Unfortunately, many of these methods are overused, and messages are often ignored by the recipients. Members of university communities generally receive large numbers of emails with messages or links to newsletters. They have access to dozens of university central administration websites and central information systems. There can be several central administration offices involved in the administration of their sponsored programs. Even knowing who to contact for what can be very challenging.

Communication Cannot Move in Only One Direction

The most important thing to keep in mind when trying to design an effective communication plan for a central research administration office is that communication will not be effective if it only travels in one direction. While some messages will need to be “delivered,” a successful communication plan has to keep in mind that communication needs to travel in many directions. When a central office has the need to communicate an important change or new policy, the likelihood of a positive reception will be greatly increased if the community has had the opportunity to be involved in the development (when reasonable and appropriate).

Use Multiple Methods of Communication

There is no one method to best communicate financial research administration news and policies. Relying on one method of communication to reach dozens, hundreds, or commonly thousands of members of a research community would be foolish. As

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we all have different learning styles, we all have different communication styles. Posting a new policy on your central policy website and assuming that it has been communicated would be foolish. While perhaps a good idea in concept, most administrators will probably not visit the policy website regularly to check for updates or additions.

There are a variety of methods commonly utilized to widely communicate financial research administration news and changes:

**Listservs.** Sending messages out via a listserv made up of a select group of interested parties can be a very valuable resource. However, this should be used sparingly for important messages. Sending large numbers of messages with information of varying and limited levels of value can lead to recipients deleting them without reading. Generally, this mode of communication is best used for information that needs to get out there immediately and demands high attention from many or most of the listserv members. Utilizing the subject line to grab the appropriate attention and audience is strongly recommended.

**Newsletters.** Newsletters can become an essential communication mode for many research communities. It can provide a single location for research administration information. Coordinating efforts with other central offices such as the pre-award office makes good sense. Limiting the number of newsletters that need to be reviewed by the research community increases the chance that they will read what is made available. The initial announcement of the availability of a newsletter should be widely communicated with the message that everyone involved in sponsored project administration should view each newsletter as made available.

A newsletter can be very effectively used as the main information source for research administration news. In order to accomplish this, the central office should communicate that all important changes or announcements related to sponsored project administration will be included in the newsletter (emphasizing that a review of each issue will ensure that one is aware of what they need to know). It is recommended that all issues are posted and retained on the central department’s website. In addition, the use of an opt-in listserv is recommended for sending out the issues as they are published. Many institutions find that monthly issues work best while others find that quarterly (or less frequently) can meet their needs. Newsletters can be fairly easily developed using software such as Microsoft Word or Adobe InDesign. They can be provided in printable or html formats.

**Websites.** Obviously, websites can be a very effective communication tool. However, it is important to keep in mind that people will typically visit the website only when they have a specific need. While posting news on your homepage can be valuable, important announcements should not be communicated only on the website. Careful consideration and planning should be given to the organization of the website. It is important to obtain feedback from the community you are trying to reach on the effectiveness of your website. They should be able to find the
information they need without significant struggle. All websites should include the contact information for someone to provide feedback to.

**Old-fashioned Human Contact.** While modern technology has brought many efficient methods to communicate to large numbers of people very quickly, it often lacks many of the benefits that direct interaction between two or more humans can provide. Providing information in person allows the communicator to respond to any confusion or questions immediately. It provides the receiver with the opportunity to express any questions or concerns. The challenge here is reaching the large number of interested parties within a University. Effective methods for doing this can include offering open forums or town halls which work well for providing many with the opportunity to have input. However, detailed issues can often be better addressed in smaller groups. Forming committees that represent the different groups within the institution can usually be more effective for obtaining feedback and comments on specific issues. For example, having a group of faculty and a group of non-central administrators (from across the institution) can provide strong forums for receiving feedback on decisions to be made.

**Surveys.** For some decisions, utilizing smaller or open forums to receive feedback or discuss particular issues may not be appropriate or efficient. Obtaining feedback from larger groups can often be most easily accomplished utilizing an electronic survey. There is a variety of low or no cost tools available that will allow you to set up a simple survey that will gather a variety of information from a large group. It is important to carefully design your questions to obtain the information you need in as few questions as possible. When sending out the survey, it is important to note how long the survey should take (the longer it takes, the less respondents you may have so keep it as brief as possible). You should also include a note as to when the survey must be completed and will close.

**Educational sessions.** The main communication role of a central financial research administration office is disseminating the information the research community needs to properly administer their project. This often goes beyond simpler communications and expands into more of an educational effort. Offering brown bag lunch sessions or brief educational sessions on a particular topic can provide an opportunity to more fully communicate a new policy, procedure, or process.

**Online educational modules and tools.** While in person educational sessions work very well and should be included as part of the communication efforts, online educational tools can be very effective in providing the information that many need in an easy to access format. While there is a variety of creative software available to develop online education, power point presentations can be effectively used in this area. Financial research administration areas where these modules can be effective include (but are not limited to) topics such as the OMB circulars and effort reporting.
**Did you get the memo?** While the formal memo is seen less and less these days, it still has its value. For important issues that need to have attention drawn to them, issuing a memo (that can be sent as an attachment to a listserv announcement and posted on a website) can provide a more official announcement for an important communication.

In the demanding and busy pace of a central financial research administration office, it can be extremely challenging to maintain a high focus on the area of how we communicate. However, the ability to effectively communicate news and policy changes from the central financial research administration office to the institution’s research community is essential to a successful research enterprise.
Navigating the Four Corners of Change Through Collaboration
Greg Luttrell, University of Notre Dame

Change is not just a campaign slogan; it is a constant. In our personal lives, change manifests itself in numerous ways: marriage, divorce, birth of a child, death of a loved one, promotion, pursuit of other opportunities, and so on. These life changes can be planned or unexpected, and in either case can generate strong emotions and confusion that can cause a temporary loss of vision of the path along life’s journey.

Layered upon these personal events are the changes one experiences in the workplace. These changes too may be planned or unexpected. Changes such as the incoming or outgoing transfer of colleagues, the rearrangement of an organizational chart, campus-wide implementation of new electronic systems or the creation of a different strategic focus for the organization can also generate feelings of unease and disorientation that, if left unmanaged, can blur the organization’s vision.

Each individual and organization responds to such changes in different ways and at different rates. A critical component of the art of leadership is the ability to discern where the individuals composing an organization are on the continuum of change implementation. Many are familiar with the Kübler-Ross model, commonly known as the “Five Stages of Grief.” This model was first introduced by Elisabeth Kübler-Ross in her 1969 book, On Death and Dying. Similar to the Kübler-Ross model’s description of five discrete stages through which an individual progresses when dealing with grief and tragedy, there are models describing how individuals deal with change. One of these models is represented by the “Four Rooms of Change” model introduced by Swedish social psychologist Claes Janssen in the late 60s and early 70s, also referred to as the “Four Room Apartment” model.

Janssen’s “Four Rooms of Change” model postulates that individuals progress through four discrete stages of change: Contentment, Denial, Confusion, and Renewal. The following is a discussion of each of Janssen’s stages of change and suggestions for leadership behavior during each stage based on the “Five Practices of Exemplary Leadership” model introduced in Kouzes and Posner’s book, The Leadership Challenge.

Contentment
In the Room of Contentment, we are concerned with Modeling the Way of being centered and in control with a strong focus on the current situation. It is also important to balance the focus on the current reality with being open to Challenging the Process, or being receptive to change so that you can take advantage of opportunities and

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1 This article is reprinted from the NCURA Magazine, Vol. XLII, No. 5, September-October 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
are not blindsided. As a leader, one should avoid treatment of the Room of Contentment as a room of complacency.\(^5\) A continual focus on processes and potential areas for improvement keeps the group from stagnating in the midst of a dynamic fiscal and regulatory environment.

You might find yourself in this room just prior to finding out you are expecting a child, before a major system implementation (ex. grants.gov), or new regulations (ARRA) are being imposed. Just prior to these changes you are likely hard at work focused on meeting deadlines, managing staff, and attending meetings, and must always be sure to keep an eye towards the horizon of continuous improvement. A group will typically experience a transition from the Room of Contentment to the Room of Denial due to internal forces (ex. New process needs) or external forces (ex. budget cuts).

**Denial**

The Room of Denial is understandably difficult, but essential to the change process. The group may be experiencing anger, disorientation, apathy, disappointment, or any combination of the above. As in the Room of Contentment, a leader needs to be open to **Challenging the Process** and being receptive to change. It is critical to **Model the Way** by staying calm so that you can be open to hearing new information as it becomes available and creating an environment that is conducive to information sharing so that you can **Enable Others to Act**, or assimilate information and create future structure or process.

Before the group can transition from the Room of Denial to the Room of Confusion, it needs to exhaust itself of the feelings of discontentment described above. While the pragmatic, perhaps impatient, leader might consider the group’s necessity to vent as an unaffordable luxury and a waste of time, it is important to allow those storm clouds to dissipate rather than steering the ship away from them. Allow everyone to be heard, including the introverts in the room that may feel uncomfortable among the venting extroverts. One thing to keep in mind is that it is important to make sure that venting is done constructively in the workplace (and beyond!). A creative idea to turn venting into a constructive activity is to brainstorm.\(^6\)

The Room of Denial is not one that will produce the solution(s) to the situation at hand, yet it is vitally important to **Encourage the Heart** as we support each other through the transition into the next room.

**Confusion**

The Room of Confusion is a place where you have acknowledged that change is a reality, but that reality is still not clear. You are in a place where you can start to figure out what initiated the change, what the change means, and what the future will look like as the pieces of the puzzle start to come together.\(^7\) In this Room it is critical that you **Model the Way** of bringing people together to share information and

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\(^5\) “Managing Change,” web.mit.edu/hr/oed/learn/change/art_four_room.html


\(^7\) See footnote 4.
to collaborate. As information comes in and the vision becomes more defined, we need to commit ourselves to *Inspiring a Shared Vision* in each other. While Inspiring the Shared vision, it is still important to give people room to *Challenge the Process* as we analyze information and fine-tune the vision. Through *Enabling Others to Act*, we allow our colleagues to guide themselves through the Room of Confusion and transition to the Room of Renewal with a clearer vision of where they need to go.

The Room of Confusion is the one in which the direction forward is charted. Similar to the Room of Denial, each group member should be encouraged to participate in the problem definition and the solution selection. Again, the leader should focus on gathering input not only from the always-willing-to-contribute extroverts, but also from those who may take a bit longer to formulate and express their opinions. A more thorough approach in this room will enable a better solution than one that is hastily contrived.

### Renewal

In this Room, all five of the Practices of Exemplary Leadership can be applied. The Room of Renewal requires that you *Model the Way* of moving the organization and processes forward. To accomplish this goal, it is necessary to give people the structure and freedom to digest their new reality, which can be accomplished by *Inspiring a Shared Vision*. While we are in the Room of Renewal, we start to transition to the Room of Contentment, where we are at ease with our current reality, but must still keep our minds open to continue to *Challenge the Process* in a commitment to continuous improvement. Throughout the experience in this room, it is also critical that we continue to *Enable Other’s to Act* by allowing them the freedom to piece together their new reality within a broad framework. And of course, as with each room we visit, it is critical that we continue to *Encourage the Heart* as we support one another through the change process.

The Room of Renewal is where the group can take a breath and celebrate a victory, whether it is great or small. You have gotten past the anger in the Room of Denial, the wilderness of potential alternatives in the Room of Confusion, and arrived at the place where the future path can finally be viewed. Again, the leader should be patient and allow the group to express itself. Bring the group together and reflect on the process by reviewing the successes and/or disappointments that lead to this point. Recognize achievement of the group and the individuals that enabled the success. Resist the urge to “put this one behind us,” and focus on the next challenge. Allow the celebration to take its course, just as allowing the clouds to dissipate in the Room of Denial.

### About the Author

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520.14 The Leadership Paradox
Joyce Ferland, Tufts University and Jeff Ritchie, Aurora Health Care

The field of research administration deals with crises, deadlines, paperwork, bureaucratic red tape and, more recently, the pressure to do more with less. With the high pace of the research administration field, promoting effective working relationships is essential to organizational success. By gaining awareness and appreciation of the different ways you and your team can build relationships within your environment, you can learn to work more effectively and become a better leader. To assist with this, we have outlined seven paradoxes.

1. Leaders Who Are Strong Ask for Help

Increased scrutiny imposed upon institutions has forced many universities to tighten their business processes. One question research administration leadership should ask is “who can help?” One option would be to get stakeholders (central accountants, department administrators, other leaders, etc.) involved with the process. This can be accomplished by asking for advice, for input and recommendations in addition to delegating, trusting and training… in other words fostering teamwork.

When research administration leaders ask for help from a position of strength, accompanied by proven ability and trust, it has an immeasurable effect. The paradox involved here is that there are some who believe that asking for help is a sign of weakness. In reality, research administration leaders must be strong and self-confident to ask for help; paradoxically, it is when they ask for help that leaders gain increased stature, respect and gratitude. Successful teams and team work fuel the accomplishment of your institutional goals. Fostering teamwork is creating a work culture that values collaboration. In a teamwork environment, people understand and believe that thinking, planning, decisions and actions are better when done cooperatively.

2. Leaders Who Share Power Gain Power

Leaders who share power gain power. If we use our power to empower others, our influence will extend far beyond our grasp. The paradox is that leaders who share power assume heavier responsibilities because they are still accountable. Leaders make their subordinates feel stronger through sharing their power. When retaining responsibility, power is delegated; when delegating a task, delegating the authority is also necessary to carry out the task. Failure to do this negates the purpose of delegation. Withholding power results in less confident followers who are afraid to attempt projects for fear of failure. In today’s current economic situation, reduction in workforce is commonplace in both university and hospital settings. Due both to this reduced workforce and the increased scrutiny and compliance regulations imposed

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upon our institutions, leaders in research administration have more responsibilities with fewer resources. Delegation is an essential part of management.

3. Leaders Who Give More Receive More

The old axiom is true “the more you give, the more you receive.” A perfect example of this is volunteering for NCURA. What do NCURA volunteers receive in return? Volunteers gain the opportunity to help guide the future of NCURA, to establish a strong network of peers, to acquire new skills and experiences, and to help advance the field of research administration. This is paradoxical because some could perceive that research administration leaders share their knowledge with others could create competition and then could be displaced. However, leaders who are secure and possess inspired visions realize that training people strengthens teams.

4. Leaders Who Take the Blame Avoid the Blame

Let’s say that Dr. Jones has been experiencing difficulties with getting his R-01 application put together and out the electronic door on time, and he is not satisfied with the support he has been getting from your staff. Your staff reports that Dr. Jones has rarely made himself available to discuss the project, and they’re getting plenty frustrated as well. As a manager and a leader, you need to be prepared to accept your legitimate share of the blame for this situation, but at the same time, you need to be prepared to go to the mat for your staff. If your people were not prepared to handle Dr. Jones’s application, you need to own that, but you need to make it clear to Dr. Jones that he plays a role in this process and needs to be available. To really understand this paradox, look both up and down the chain of command. If you studiously avoid accepting the blame for ANY situation, you are exhibiting a lack of judgment to your superiors and a lack of accountability to your subordinates. When there are legitimate complaints with service that your people provide, accept responsibility for it and work with Dr. Jones and your staff to fix the problem.

5. Leaders Who Take Time, Save Time

“I can do this faster by myself” is the familiar refrain from the overworked and stressed out supervisor. Rather than taking the time to transfer knowledge and reinforce behavior in the staff, the manager thinks that it’s more expedient to just do it all. Alone. Every time. This is a recipe for professional burnout. Taking the time to train your staff (including your colleagues and superiors) is making an investment in your future productivity. In the short term, it will require a little more of your time to mentor those who need your expertise to perform the myriad tasks required of a research administrator. In the long term, you’re going to have a more efficient and well-organized staff who are capable of making good decisions without the need for your constant guidance.

As a manager, there is nothing more satisfying than learning that there was a crisis yesterday that your staff successfully resolved without your involvement. While there is a degree of technical expertise involved, another key component of “training” is establishing basic professional values within your organization. Quite often, the important decisions are not driven by the demands of policies and proce-
dures. They are driven by what your staff perceives to be the values of your department, so make sure that you clearly communicate – by words and by actions – what those values are.

6. Leaders Are Not Technicians

To be an effective research administrator, one needs to master a daunting body of technical knowledge. We have to be able to review a research contract just as efficiently as we order supplies from the procurement office. The degree of technical expertise required for our profession is ridiculously high, which is why we often can’t see the leadership forest for the technical trees. The paradox here is that to be an effective leader in research administration, one needs to lay aside the emphasis on those technical skills. Of course we know how to write a budget for a training grant, but we have to comfortable with allowing our subordinates to do the technical tasks while we handle the oversight and managerial duties that come along with leadership.

Nobody likes being micromanaged, and I suspect that even leaders would admit that looking over the shoulder of their staff doesn’t make for a professionally satisfying workday. You still need the body of technical knowledge that you gained while rising in this profession, because new professionals are entering research administration every day. Your role now is not to be a technician, but to be a teacher and a mentor to your staff. For years, you were willing to learn everything you could about being an effective research administrator, now is the time for you to be willing to share.

7. Leaders Do Not Lead

When we think of the traditional view of leadership, we think of one person out in front of a large group, leading the way into an uncertain future: The captain of a ship or the general at the head of a vast army. But the study of leadership in recent years has shown that this view is largely unrealistic. Leaders provide vision and inspiration, and while they may sometimes find themselves out in front, they’re just as likely to be in the background. Leaders are effective when they provide encouragement to others and the opportunity for others to achieve great things.

Ultimately the most important elements of true leadership are what occur out of the spotlight. Inspiring a shared vision for the institution is part of being a leader, but so is mentoring your employees and coaching them in their development as research administrators. Equally important are providing your employees with opportunities to grow, both personally and professionally, and celebrating their success along the way. These are all what we used to call the “soft skills” of management, but nothing proves to be harder. Perhaps that’s the ultimate paradox of leadership.

References

About the Authors

Joyce Ferland has recently accepted the position as Manager of Sponsored Programs Accounting at Tufts University following a 17-year tenure at Brown University. In this new position she is responsible for the fiscal management of grants and contracts in accordance with government regulations, donor requirements and University policy including post-award account management. She has been a member of NCURA since 2004 and is a graduate of the LDI class of 2009. Joyce holds a bachelor’s degree in Financial Management and is pursuing her MBA focusing on Business Leadership.

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Can We Talk? Contacting Grant Program Officers
Robert Porter, University of Tennessee

Abstract
For success in grant seeking, solid writing skills are necessary but not sufficient. In addition to compositional excellence, researchers must master the relational demands of external funding. Chief among these is the need to establish an effective line of communication with an appropriate grant program officer in the funding agency. This paper presents the rationale for initiating contact with a program officer and describes a sequential set of activities designed to assure a productive dialogue. It concludes with a sample coaching script research administrators can use to assist investigators in this critical process. The time taken to do this, prior to writing the proposal, will be the best possible investment new researchers can make in the grant seeking aspect of their academic careers.

Introduction
“A sound concept, but it does not fit our current funding priorities.” Each year, disappointed grant writers will read comments like this on the reviews that accompany notices of proposal rejection. Successful grant writers know that early contact with a program officer before deciding to write a proposal is key to avoiding this distressing outcome (Porter, 2005). Pre-proposal communications can have a powerful impact on the researcher’s thinking, from reshaping the research design to rethinking where the proposal should be submitted, or if it should be written at all. Most grant writing texts mention the importance of early and effective communications with grant officers, but few offer specific advice. The most helpful materials have been published by New and Quick (1998) and Blackburn (2003). This paper presents an extension of their work, emphasizing the research administrator’s role as coach and mentor to inexperienced investigators.

Background
This article is based on interviews with sixteen senior researchers at Virginia Tech that were the basis for a 2005 paper published in The Journal of Research Administration, “What Do Grant Reviewers Really Want, Anyway?” All had strong track records in sponsored research, served on multiple review panels, and interacted with numerous grant program officers. Further insight has been gained as the author designed and directed an annual Grant Writing Institute at the university, which involved a series of intensive summer sessions over a three-year period from 2006 to 2008 that included a “Day in DC,” where a total of thirty-four faculty members met with program officers at several funding agencies. In debriefing Institute participants after such meetings, the author noted important lessons learned, especially

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where program officers imparted critical information that was not apparent from their grant programs’ printed materials or the agencies’ web sites.

**Skill Sets for Success**
Creative scholarly expertise drives sponsored research in all disciplines, and strong grant writing skills are a recognized prerequisite for success. Less widely appreciated is a second skill set—the relational skills needed for positive interactions with a sponsor agency (Figure 1).

![Figure 1. Skill Sets for Success](image)

At the outset, the most important relational skill needed by researchers is the ability to initiate and maintain contact with an appropriate grant program officer, a dialogue that aims to (a) determine whether the researcher’s basic concept is a good fit with the program’s goals and objectives; (b) seek advice concerning project design and appropriate funding track; (c) ascertain trends in preferred research methodologies; and d) identify possible limits in project duration and budget.

While several senior investigators commented on the importance of relationship-building, one senior researcher with an impressive funding history credited this skill as key to his success: As a PI or co-PI you need to have a relationship with the program manager. Your job in writing the proposal is to help the program manager be successful. I really believe that. So if the program manager says, “Look, I want to develop the next XYZ,” your job is to help him or her be successful by doing just that. That’s the truth. Your job is to help that manager establish that XYZ program. You do it by showing a 2 or 3 page white paper and asking “How about this, does this fit your program?” It’s very important to strike up a relationship with the program manager in a somewhat personal way. I mean go visit face-to-face first: You don’t want to send a white paper out of the blue, you want to go up to DC and meet these people (T. Long, personal communication, May 20, 2004).
A Question of Fit

Starting to write a proposal without assurance of how well it matches what the sponsor wants to fund is a bad gamble indeed. New and Quick (1998) have estimated that up to 60% of all proposals are eliminated on first reading because the writer had not made an adequate project match or failed to follow directions. Where there is a poor fit, grant writers squander a good deal of their most precious resource—time—developing, revising and polishing documents that have little or no chance for success.

Why do many bright people make such a fundamental mistake? The answer could lie in longstanding traditions of academe. From sending off papers to refereed journals to applying for jobs, academics are accustomed to parsing meaning from written materials, expressing their best thinking in written form, and then awaiting the judgment call. Writing or phoning to inquire if the paper will be published or the job will be offered is considered gauche, if not verboten. In the absence of coaching to the contrary, they reflexively apply the same habits to grant funding agencies, not realizing that winners in sponsored research play by different rules altogether.

Tip of the Iceberg

Young investigators are prone to plunge into proposal writing based on what they read in the program solicitation. But this information is like the tip of an iceberg. Much of what needs to be known about that program—the critical success factors—is hidden beneath the surface and cannot be gleaned from the most careful study of published information. Following are core findings from interviews with seasoned investigators, as well as numerous meetings with program officers as reported by less experienced researchers in Virginia Tech’s Grant Writing Institute:

1. Published material should be viewed as just the “official line” for the grant program, and may not reflect underlying considerations that determine which proposals are likely to be successful.

2. Program officers and their review panels can develop distinct preferences and dislikes over time; these rarely find their way into print.

3. Program priorities can shift over time, sometimes substantially, while published materials remain unchanged.

4. A PO’s candid, informal response to the proposal’s core theme is the best predictor of success, even though no guarantee is expressed or implied.

5. PO’s can and often do give valuable advice on matters related to program track, budget, collaborations, and project structure.

6. Finally, if the proposed project is not a good fit with the identified program, the PO can often suggest better alternatives.

In short, the unofficial “rules of the game” can separate winners from losers, and these are best learned at the outset. Finally, it is well to remember that the part of the iceberg that sank the Titanic was below the water.
Why Program Officers Welcome Inquiries

For investigators who are new to sponsored research, the prospect of initiating contact with an official in a funding agency can be daunting. How will I be received? Is it really legitimate to discuss my project before I’ve submitted a proposal? Can I be specific enough to be credible? Unanswered, questions like these can freeze a young investigator’s initial apprehension into a state of permanent inaction, needlessly. In fact, most program officers welcome such contacts for a variety of reasons.

First and foremost, as Blackburn noted, talking to researchers is one of the most important responsibilities assigned to PO’s, especially by the federal agencies, so we should help them do their jobs. They are supposed to give away money, not hold on to it. Also, it is well to keep in mind that most PO’s are former academics; many were successful in their research careers prior to joining the agency, and they enjoy opportunities to reconnect with their academic counterparts. For a deskbound bureaucrat, talking over fresh ideas is a pleasant way to keep up with the field and track future directions. Two other motives have a more practical bent: First, if the core idea is not likely to be funded, the PO can reduce the office workload by discouraging the submission. Conversely, if the PO finds the idea intriguing, she or he might provide helpful hints on how to shape the proposal in ways that will result in a more positive review.

Finally, key federal agencies—the National Science Foundation, National Institutes of Health, Department of Energy, National Endowment for the Humanities—engage grant reviewers by the tens of thousands each year and are constantly on the lookout for fresh talent. A young investigator should never hesitate to express a desire to serve on a review panel; it will be a graduate education in grant writing (Member, 2003, Porter, 2005).

A Sample Coaching Script for the Research Administrator

Apprehensive young investigators will benefit from coaching on how to arrange a successful encounter with a program officer. The following is a sample coaching script for the research administrator, written as advice to the researcher:

1. **Identify the grant program(s) whose objectives most closely match the core themes of your proposed research.** Study the mission statement of the program office and parse any relevant program solicitation. Be prepared to modify your ideas somewhat to assure a good fit, as long as you stay within your proven expertise. Look up recent awards to see how your work will make a contribution or fill a gap. From the staff directory, identify an officer who has responsibility for that program.

2. **Write a brief pre-abstract summarizing your proposed project.** Using accessible language with a minimum of specialized terminology, describe your project in concise, concrete terms. List your main objective(s), methods, and expected outcomes. Stress the project’s uniqueness and how the outcome(s) will address an important problem or contribute to the field. The PO does not need much detail to give you an initial reading, so do not write more than half a page. Rehearse it until
you can recite it easily and without hesitation. Think of this as an “elevator speech,” as it helps to envision a personal, time-limited encounter with a PO. A sample pre-abstract is included here as Appendix A.

3. **Start with an e-mail.** In your pre-abstract, indicate why you think your project will achieve the grant program’s objectives. End by asking if your work is the kind the program might consider funding. You should get a response within a day or two—study it for tone and nuance as well as its direct message. You might get a recommendation to contact a completely different program office. There might be hints about how to strengthen your proposal. Some PO’s will ask to see a longer description of your project—usually a positive sign. If there is encouragement of any kind, go to the next step.

4. **Make the call.** Once there has been an exchange of e-mails, you have a relatively easy way to begin the conversation. Describe your project again, and then say you would like to discuss some issues the PO raised in the e-mail. If it is a federal agency and you happen to be within reasonable travel distance to Washington, ask if you could meet within the next couple of weeks. One way is to suggest that you are planning a trip to the DC area and it would be convenient to stop by. If the PO agrees to a meeting (and many will), you should expand your pre-abstract into a short (1–2 pages) white paper and send it first. For researchers applying to the National Science Foundation, the Office of Proposal Development at Texas A&M University has published a particularly helpful guide to preparing for a face-to-face meeting (Nader, 2009).

5. **Take advantage of professional meetings.** In addition to contacting PO’s in their offices, researchers in most disciplines have opportunities to interact with program officers at regularly scheduled academic and scientific conferences. PO’s attend these events to keep abreast with current and emerging developments in their fields, and often to present topics of their own.

   Additionally, NSF and NIH hold regional grants conferences at locations around the country (National Science Foundation, 2010a; National Institutes of Health, 2010). Attended by numerous program officers, these events are specifically designed to update researchers and research administrators on agency policies, changes in the grant application and review processes, as well as developments in funding priorities. Of special interest to less experienced researchers are the NSF Days, hosted several times a year by sponsoring colleges and universities (National Science Foundation, 2010b). As members of National Council of University Research Administrators and the Society of Research Administrators know, their national and regional meetings typically feature presentations by program officers from several federal agencies.

6. **Conducting a successful conversation.** Whether by phone or in person, remember you are using this as an opportunity to obtain “between the lines” information to decide (a) whether to write a proposal for this program; and (b) how to shape it in
such a way to get a favorable review. In the course of the conversation, seek answers to the following:

*Does my project fall within your current priorities?*

If it does not, explore different objectives that might yield a better fit or ask for suggestions of other programs that might be interested in your project.

*What would you recommend to improve my chances for a favorable review?*

Do not be bashful about asking this question—the PO knows this is the main reason for your call!

*What is the anticipated proposal success ratio?*

Success ratios are your statistical odds for success. Rates are highly variable among grant programs, ranging from 5% to 40%, with most in the 10–20% range. First-time submissions have lower rates; resubmissions are higher.

*Do you expect last year’s average award amount to change this year?*

This answer should help you determine your project’s budget size.

*What are some of the common reasons for proposal rejections?*

This will help you understand likes and dislikes of review panels that do not show up in the program’s written materials.

Throughout the discussion, listen carefully for helpful hints about proposal structure and content. Do you hear any “buying signals,” i.e., signs that the PO is intrigued by your idea? Conversely, be on the lookout for hints that the PO does not think you have much of a chance. (Sometimes they hesitate to come right out and say it.)

7. **Follow up.** A short “thank you” note is more than good manners—it is a way to keep the line of communication open and fresh for both parties, especially if you summarize the key points you heard in the conversation. It is also a good idea to repeat your desire to serve as a reviewer, and attach a one-page CV with your picture on it. Sponsor agencies seek to enhance the diversity of their panels, and some, like the National Science Foundation, will engage young investigators before they write their first proposals. Others, like the National Institutes of Health, typically issue an invitation after the first award is made.

**Conclusion**

Even if they are new to sponsored research, investigators should not hesitate to initiate contact with program officers. PO’s are accustomed to these inquiries, and most will do their best to be helpful. As stressed repeatedly by National Science Foundation officials at a regional grants conference: “Ask early, ask often!” (National Science Foundation, 2007). The time taken to do this will be the best possible investment inexperienced researchers can make in the grantseeking aspect of their careers.
APPENDIX A

Sample Pre-abstract

TO: Director, Green Infrastructure Grant Program

I am writing to inquire if our research project is suitable for funding by the Green Infrastructure program. Its title is “Green Infrastructure: Collaborative Networking for Sustainable Water Systems,” and our major goal is to demonstrate how this concept can be implemented at the local and regional levels by forming effective working relationships among academic researchers and community leaders.

While the significant environmental and economic advantages of decentralized water distribution systems are well known, communities in the U.S. have been reluctant to adopt them. We propose to utilize a community capacity-building model to inform community leaders of the long-term advantages of current technologies, while providing educational and technical assistance to encourage their adoption. Our interdisciplinary team includes specialists in the technology of sustainable water systems, environmental design, organizational change, and building community capacity.

Our project outcome will be a model program that showcases the merits of local sustainable water management systems, with a strong potential for national and even global impact. To accomplish this we will (1) Form a consortium of local governments, regional planning commissions, and state agencies; (2) Develop an electronic manual for planning and implementing decentralized, sustainable water systems; (3) Offer workshops on sustainable systems to target audiences; (4) Develop an interactive web site that will facilitate networking and decision making; and (5) Develop video clips, exhibits and brochures for broader impact. Project assessment will be undertaken by an external evaluator with national experience in this field.

Is this project a suitable fit with your program? If so, we would appreciate your advice about how to proceed with proposal development.

Sincerely,

Aqua Vita, Ph.D., Director
Water Resources Research Center
Alpha University
Literature Cited


About the Author

Robert Porter is Director of Research Development at the University of Tennessee, where he works with faculty to enhance their grant writing skills. With thirty years’ experience as a tenured professor, private consultant, and research administrator, his proposals have won major awards from government agencies and private foundations. Dr. Porter has presented papers and workshops on grant writing at national conferences and has published prize-winning articles on this subject. In addition to working with University of Tennessee faculty, he has conducted grant writing workshops at leading universities and medical schools nationally.
1520.16  **Bringing Out the Best in Both Introverts and Extroverts on Your Team**

Erin Bailey, Buffalo Center for Social Research; Julie Guggino, Central Washington University; and Samantha J. Westcott, University of California, Irvine

Demanding leadership challenges in both work and personal relationships often originate from the personality differences between introverts and extroverts. How many of us have been in a meeting with individuals who are quick to respond, often talking over one another or talking over anyone who speaks? At that same meeting, others may sit quietly, seemingly taking everything in, or appear bored or overwhelmed. Meetings and other workplace activities often fail to be productive when conflicting personalities contribute to a breakdown in communication. Neither personality type is better than another; however, learning to successfully lead your team to coalesce where all members play to their strengths and understand how to work together can lead to greater success for the entire organization.

**Introverts and Extroverts 101**

The terms “introvert” and “extrovert” may be defined as follows: “(1) Introvert: An individual in whom exists an exaggeration of the thought processes in relation to directly observable social behavior, with an accompanying tendency to withdraw from social contacts. (2) Extrovert: An individual in whom exists a diminution of the thought processes in relation to directly observable social behavior, with an accompanying tendency to make social contacts.” (Freyd, M. Psychological Review, Vol 31(1), Jan 1924, 74-87.)

Since 1975 the Myers-Briggs Type Indicator (MBTI) has been used for psychological assessments and as a self-exploration tool. It considers four personality preferences:

◆ Extroversion/Introversion: how people derive their energy;
◆ Sensing/Intuition: how individuals perceive the world around them;
◆ Thinking/Feeling: how individuals make decisions; and
◆ Judging/Perceiving: how individual’s public personas, or outer world orientation are viewed.

In this article, we will discuss the Extroversion/Introversion personality preference. As with many aspects of the human personality, introversion and extroversion spectrum can be seen as a continuum.

Each individual’s preference falls somewhere along the continuum. Introverts are internally-directed. An introvert needs time to reflect, appears reserved, contained, and guarded in public. Introverts are often considered “deep” by others. The introvert typically thinks before speaking. Extroverts, on the other hand, are externally-directed. An extrovert is often action-oriented, appears gregarious, expressive,

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and unreserved in public. An extrovert typically needs to speak to think.

These observable behaviors intuitively make sense when some of the physiological differences between extroverts and introverts are examined. With newer technologies like brain scanning and mind mapping, scientists are beginning to identify physiological differences. Introverts, for example, have a longer neural pathway in their brains and more blood flow to the parts of their brains related to internal experiences like remembering. Extroverts’ blood flow, conversely, is increased in the areas of the brain supporting sensory input: seeing, smelling, sensing. Introverts and extroverts neural pathways also rely on different neurotransmitters. Extrovert pathways utilize dopamine differently than do introvert pathways whereas introvert pathways utilize acetylcholine.

**Introverts and Extroverts in the Workplace**

With such a broad spectrum of personality types ranging from the most reserved to the most outspoken, respecting one another’s work styles and finding ways to accommodate the continuum of personality types will result in greater job satisfaction and increased productivity. We will explore opportunities where leadership can bring out the best of everyone on the team.

In meetings, for example, while introverts may find meetings stressful and often times draining, extroverts may see meetings as a way of being productive: a way to energize their batteries and energize those around them. For many introverts, their voices will be heard later, sometimes much later, after they have had a chance to examine all the facts and come up with a sound and informative answer. The leadership necessary for making successful meetings begins with awareness: the leader who can see those quietly biding time and find opportunities to make sure their voices are heard will enrich the interactions in meetings. With proper planning, effective leaders can intervene and create conditions that bring out the best in both the introvert and the extrovert and lead to more productive, effective meetings. Setting a tone and stating expectations for meetings can help curb the distraction or talking over and allow each voice to be heard. All those on the spectrum benefit from one another being a party to the meeting. The introvert needs the spontaneity and energy of the extrovert to start discussions and bring ideas to the table; while the extrovert learns to value the introvert’s ability to look at all the facts and problem solve.

In day-to-day interactions, consider some of your colleagues – you can probably name those who get their energy being around people. Those team members are likely extroverts. When extroverts are faced with a problem, they like to bounce their ideas off others. The extrovert may pick up the phone and call someone or drop by a colleague’s office. They have a need to connect with people. They externally process information and thrive on the energy from others to solve their problems. Extroverts are typically vocal, spontaneous and comfortable expressing their ideas. Introverts, on the other hand, get their energy from working alone and processing information internally. When faced with a problem, introverts need to gather all the facts and need time to process the information before giving an answer.

To work most effectively, introverts need to have a space where they can retreat
and work quietly. They dislike interruptions and are content to work alone. They don’t mind working on long, complex, even tedious, projects. Extroverts can more easily adapt to open concept office environments and may actually increase their productivity due to the constant interactions. They are more welcoming of interruptions and physically move around more. They are quicker to become bored or impatient with repetitive tasks.

**Effective Workplace Leaders: Introverts or Extroverts?**

A good leader can be anywhere on the spectrum: from the shiest introvert to the most outspoken extrovert. Outgoing personality traits are often associated with top leadership roles. They are the ones seen as outgoing, assertive and excellent at giving directions. However introverts can also be great leaders with their attention to detail, listening skills, and their ability to think through issues in a more focused manner. Research suggests many businesses fail when they do not promote executives with more understated styles. Both introverts and extroverts have various talents and strengths and neither should focus on what they are not. Successful leaders know they are not perfect at everything nor do they want to be, hence they select team members who compliment their challenge areas as well as having a strong track record.

Effective leaders who are aware of the interpersonal dynamics of the members of their team can help alleviate problems based on the differences between introverts and extroverts. There are often assumptions or misunderstandings that occur when individuals come from different personality types. The two different types are diverse in the way that each processes information. If a person is rewarded for participating in meetings in an office, it can create tension for those who find it uncomfortable to speak up in meetings. On the contrary, if the atmosphere is unwelcome to those who think creatively in the moment and who may stray off-topic to follow a train of thought, it can stifle some of the ideas of those who work best when in a group setting. The best listeners in a group are not often the ones who share openly and their contributions can be missed. A lack of response may be misread as a lack of interest by someone who is openly sharing ideas and working within the group. Sometimes, conflict can be extended beyond what is necessary to solve it due to a need to talk everything out by some in the team. Other times, conflict avoidance can be detrimental, as key problems do not get addressed if they are not brought to the surface.

Given that effective leadership is not tied to a specific personality trait or type, the benefit of accepting the different personality types exists in how a leader both understands himself and how he understands and works with his respective team members. A major portion of a leaders’ role is communication, so it is very important for leaders to understand how their employees’ process information, so the leader can adjust their approach to fit their audience needs. Also the leader with this insight can create a safe space in meetings to seek input from those who may be reluctant to speak. Through the resulting diversity of thoughts shared, the end result likely will be more effective and have greater buy in by the entire team.

A leader’s natural style will also offer enhanced development opportunities to the team members. Since a leader’s success is normally a direct result of his team
members’ success, everyone wins when everyone’s strengths are leveraged. A leader who is on the far extreme end of the extroversion side of the scale may offer his team the networking and interpersonal skills that make connections to effectively improve business. A leader who is extremely introverted may offer his team the benefit of long-range strategic planning and written communication skills. The extrovert can lead those team members who are not as likely to stand up to opportunities to shine by connecting them to projects for which they would not volunteer. The introvert can lead those team members who are outspoken to more introspection by modeling the benefits of taking the time to make a thoughtful decision.

The differences in personality types are real and they matter. The contributions of the individual to the team are best when the individual can work at his best. While it is impossible to create an ideal environment that works for all members of a team all the time, knowing how each works best and providing those opportunities for the team member to thrive and do his or her best is the job of the leader. Giving the introvert the time to think, work independently, work quietly, and to get the job done right is key. Offering the extrovert the time to connect and work with others, to listen to others, and try doing things differently than before while still meeting the deadline can lead to success. Furthermore, forming teams that are balanced and sharing the expectations up front of how the team will work together and use their strengths to achieve the goals can offer the chance for every member of the team to share in the success. As introvert Henry Kissinger once said, “The task of the leader is to get his people from where they are to where they have not been.” The journey is as important as the destination to ensure long term repeated success.

**Tips for Extroverted Leaders:**

- **Be concise.** While you are invigorated by talking, are energized by interruptions, others may consider you overbearing and overpowering.

- **Circulate information ahead of a meeting.** Provide as much written information as is feasible before a meeting so that introverted team members have a chance to review the material in order to give you their best thinking.

- **Don’t expect immediate decisions.** Pressuring introverted team members to come up with a decision on the spot may likely result in a decision that they don’t fully buy-in.

- **Allow silence its moment.** A common complaint of introverts about Extroverts is about their listening skills— in particular, their rush to fill the silence. Practice self-management by valuing pauses which allow the real conversation to be heard.

- **Ask introverts for their thoughts.** Introverts generally dislike having the light shining on them, so you may have to seek out their opinions. It is often more fruitful to meet one-on-one rather than in a public forum.

- **Respect introverts’ need for privacy.** Practicing good social awareness skills entails understanding that extended extroverted activities can be draining for introverts.
Tips for Introverted Leaders:

◆ **Give visual clues when listening.** While introverts are often better listeners, their expressions may sometimes give the impression that they lack interest or involvement in the topic being discussed. Remedy this with simple things like a nod, a smile, and leaning forward—micro gestures that go a long way to signal to others that they are indeed being heard.

◆ **Raise your comfort level with public speaking.** If public speaking ranks among one of your top dreads, resolve to conquer this. Developing the ability to stand up in front of an audience to deliver an engaging presentation is a strategic imperative. Lee Iacocca once said: “You can have brilliant ideas, but if you can’t get them across, your ideas won’t get you anywhere.” Develop the skills to help you share your brilliance with a wide audience.

◆ **Beware of voids created by non-communication.** A void will be quickly filled by rumors, misinterpretations, and grapevine musings. Take the initiative to share information.

◆ **Provide timely feedback.** Consider voicing your opinions sooner. Providing critical feedback once a project is well underway can frustrate or de-motivate others on the team.

◆ **Learn the art of small talk.** If this is not a preferred activity for you, consider that small talk is the oil that lubricates relationships and paves the way for more important discussions.

◆ **Share more personal information.** This helps more people know you better and increases the level of trust. Transparency strengthens our connections to others.


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Practical Tools

This section includes practical tools — reports, flow charts, checklists, etc. — relating to internal and external communications. This material is culled from a variety of authoritative sources.

1530.1 Time Management Tips for the Research Administrator

Shelley Hesselton-Mangan, Internal Control Reviewer, Chartwells/Worcester Polytechnic Institute

Research administrators have a wide variety of issues to deal with on a daily basis. Our minds are cluttered with the many, often conflicting, priorities faced every day. It is up to us to decide what needs to be done immediately, what can be done later, and what can be assigned to someone else or forgotten about altogether.

**What Is Time Management?** Time management can be defined as controlling the use of your most valuable (and undervalued) resource. We all know the consequences of its absence — including last-minute rushes to meet deadlines, double-booking meetings or holding ones that achieve little or nothing, crises cropping up from seemingly nowhere, and days slipping by unproductively or not as productively as they could be.

**Why Is Time Management Important?** Research administrators need to effectively manage their increasingly heavy workloads and demands on their time in order to reduce stress, cut back on long hours, and restore balance to their lives.

**How Can Over-Busy Research Administrators Achieve Effective Time Management?** One way to effectively manage one’s time is by implementing the “best practices and techniques” that fall under five key areas

- Organization
- Planning & Scheduling
- Taking Breaks
- Managing Interruptions
- Delegating Tasks

These practices and techniques are set down in Figure 530.1-1.

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1 This discussion is based on material from a presentation at the NCURA Annual Meeting, November 2005.
Survival of the Fittest

Being successful means keeping a healthy balance and not allowing work to take over your life. It is important to remember that you will eventually self-sabotage your success if you neglect any one or more of the seven vital areas of life (which are health, family, financial, intellectual, social, professional and spiritual) and that you should continually monitor and re-evaluate your priorities, choices, and lifestyle.

Research administration is not going to get any easier. There will always be a never-ending stream of changes — about which research administrators must be aware of, understand, communicate to others, and implement. Effective time management can help research administrators prepare for and cope with these changes and the ever-present worry over noncompliance.

Reminder
To be successful, remember to
- Strive to go beyond coping and surviving
- Continually learn and adopt new tricks and techniques
- Network!!
- Keep your perspective
- Evaluate and re-evaluate your priorities
When all else fails . . .
Remember why you are a research administrator!

Figure 530.1: ‘At-a-Glance’ Suggestions for Effective Time Management

Organization
File . . . file . . . file!
- Use a color-coded filing system (to easily locate paperwork).
- Make and label binders (to contain often-needed reference information).
- Keep most-often used resources within arm’s reach.
- Keep less-often used resources on out-of-the-way shelves.

Don’t crowd your desk.
- Have vertical file holders for active and pending files (on your desk).
- Use In and Out boxes for mail and other correspondence (not on your desk).
- Install over-the-desk shelving (to keep often-needed materials within reach).
- Set up horizontal file slots (to sort paperwork by action required).
- Use sorters for pens, highlighters, paperclips, etc. (don’t crowd your desk!).

Planning & Scheduling
Exercise project management.
- Review specifications of projects.
- Make sure what needs to be done is clear.
◆ Break down tasks into sections and estimate time needed for each.
◆ Assign due dates/deadlines for each task.
◆ Review progress periodically.

Stay on top of grant deadlines.
◆ Don’t wait for others to come to you: Go to them!
◆ Take a proactive stance with faculty —
  • Remove lack of communication
  • Make periodic visits
  • Make policies well known

Note: When you don’t plan your day . . .
◆ “Squeaky wheels often get the grease.”
◆ You often end up defensively reacting to demands of others.
◆ Others’ needs tend to dictate your day.
◆ Last-minute frenzies and panic occur.

Taking Breaks
◆ Consequences of skipping breaks include
  • Eyestrain and fatigue (Doctors recommend 10 minutes each hour away from computer)
  • Tension headaches and backaches
  • Decreased ability to focus and concentrate
  • Loss of energy and productivity
◆ Get out of the office (take a walk without compromising productivity) —
  • Deliver or pick up things in other departments or buildings
  • Tour your office and laboratories (keeps you on top of what’s going on)
  • Pop in on your faculty and staff (great time to ask about grant submissions!)

Eat your lunch! (Studies show that working through lunch to increase productivity actually has opposite effect.)
◆ Eat somewhere other than your desk (so you are not tempted to do work).
◆ Avoid scheduling appointments during lunchtime (early morning or late in the day is best and less disruptive).

Managing Interruptions
Plan your day.
◆ Avoid others dictating your schedule (remember: the squeaky wheel gets the grease!).
◆ Put aside low-priority issues (schedule time to take care of all of them at once).
Figure 530.1: ‘At-a-Glance’ Suggestions for Effective Time Management (continued)

◆ Schedule days and times to complete tasks (give yourself deadlines).
  ◆ Maintain a “To Do” list (do not put on scrap paper).
  ◆ Keep track of items you are waiting for.
◆ Block out times when you are “unavailable” (and try not to compromise these).

Reduce/eliminate interruptions.
◆ Set regular times to be available as well as not available.
  ◆ Make these times known.
  ◆ Can be difficult with faculty or emotional staff.
◆ Let people know “Now is not a good time.”
  ◆ Let them know when they can come back.
  ◆ Be polite!!!
◆ Advise new staff to save up questions to go over at a scheduled time.

Try to eliminate or minimize socializing (hallway conversations, family or friends’ phone calls, emails, or office chat).

Note: When interruptions do occur, get right back to task at hand to minimize impact of interruption.

Delegating Tasks
You don’t need to do it all!
◆ Give clear and concise directions.
◆ Be patient! (training takes time at first).
◆ It’s OK if it’s not done your way (let it go and allow for creativity).

Realize the long-term benefits of delegation including
◆ Reduced routine tasks and duties
◆ Increased time for other issues
◆ Staff empowerment

No staff to delegate to?
◆ Use faculty administrative assistants (typing, copying, mailing, etc.).
◆ Bring in temps for large, short-term projects or for projects beyond scope of your staff.
Many of us are charged with developing training programs on our campuses. While this can be a daunting task, it doesn’t have to be thanks to models such as instructional design methods and techniques. Two principles provide a foundation to the overall instructional design process. The first principle is to determine what the learners REALLY need to know in order to accomplish the objective. In other words, separate the “need to know” from the “nice to know” (or from our desire to tell “everything we know.”) The second principle is to ensure our training program is geared to the audience. For research administration/management training, we must assume that adult learners comprise our audience. As such, the training must provide relevant information, must be based on the learner’s needs with active participation, and must provide lessons that are logically and sequentially integrated.

The five steps of the instructional design model provide a step-by-step process for creating training programs as follows:

1. Analyze the Problem or Need. This step insures that we understand the performance problem so that we can solve the problem in the most effective and efficient way via training or a better solution. We understand the performance problem by identifying specifically what needs to be different. This is often done via information from focus groups, audit reports, performance evaluations, “gut instinct,” error reports, learners, supervisors, etc. Once we’ve identified current performance vs. desired performance, the solution will bridge the gap between the two.

Consider the following: if the performance solution comes in the form of job aids, on the job training, individual study, or perhaps involvement in a professional organization’s professional development programs, then we have a training solution. If, on the other hand, the performance solution may be met through mentoring, a reduced workload, a policy/procedure change, etc., then we may well have a non-training solution. One basic question may provide a shortcut here: “does the employee know how to meet the required performance standards?” If the answer is “no,” then training is needed.

If we find that training is the best solution, then we can describe the desired performance by determining what steps the learner needs to know in order to perform well and sequence those steps so the task can be learned in an efficient
and effective manner. Next, we must know our learners. Are they novices, experts, or everyone in between? What is their related work experience? What are their roles? Are they faculty? Staff? Students? What is the estimated number of learners who need training? What is their familiarity with university processes? For new employees with minimal or no prior knowledge and experience, training must be very basic and comprehensive. For more senior employees with extensive knowledge and experience, training would be more minimal addressing only the new or “need to know” information. Without a clear understanding of who our learners are, we cannot customize the course design, content level, and training methods to ensure optimum learning.

Choosing the instructional media follows. For this, we should consider the number of learners, the deadline for the desired performance, our budget, the frequency that updates may be required, and how often the training must be available. Next we must estimate the training costs. Our considerations here may, depending upon the situation, include instructional design time, Subject Matter Expert (SME) development time, SME/Trainer time for preparation and delivery, web developer time, learners’ time away from their job, classroom rental, materials (binders and copying per person), food per person, and commute time for both the learner and trainer. Note: At some institutions, the SME and the trainer is the same person who develops the training and conducts the training sessions. At other institutions, the SME may develop the training and an external trainer is hired or brought in temporarily to conduct the training sessions.

2. Design Phase – Content is Designed with Learning Objectives in Mind. Learning objectives are written according to the steps of the desired performance. They provide the structure for the content and help us decide what content must be included. The learning objectives keep us focused on the “need to know” information by identifying the task (what the learner must perform), the condition (how it will be performed), and the standard (how well must it be performed). In addition, learning objectives help us to sequence and structure the content so the learner can easily follow. Remember, the more meaningful the content, the easier it is to learn and, consequently, the more effective the instruction.

Along with the learning objectives, consider developing a post-test. A post-test not only forces us to nail down exactly what we want the learner to know after the training (the desired performance), but it will also help the learner evaluate what s/he knows. The posttest may be written, oral or a job-related exercise. The post-test allows the learner to immediately apply the information taught and confirm that this information has been learned for future use in job-related tasks. Take comfort in knowing it is okay to teach to the test. In addition, the post-test may be used both as a pre-test and a post-test so learners can test out of all or part of the training.
3. **Develop the Content.** This is where the learning objectives serve as our guide in selecting the content (remember “need to know” is the key). Once we’ve determined the content, we will want to sequence and synthesize the content to facilitate understanding and meaningfulness as well as retention of the content. Consider the nature of the content, the learners and organization to determine what’s best — there is no single right way to do this.

Create summaries throughout or at the end of a lesson to systematically review what has already been learned. Good examples for creating summaries are group activities, case studies, metaphors, charts — or a juicy story! Instructional activities also facilitate learning by involving the learners and helping them find the gaps in their knowledge. Learning activities enable the learners to evaluate what they know and to receive immediate feedback.

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**Training Tips for Instructions**

1. The purpose of training is to produce results back on the job. It is not to cover content. It is not to entertain.

2. Training is best when it is instructor-led, but participant-centered. This means that the focus is on the participants themselves, not the instructor.

3. Use your personal experiences to illustrate points you are trying to convey. It’s much easier for people to remember a point when there is a colorful story to go with it.

4. Adults can listen with understanding for 90 minutes, but listen with retention for only 20 minutes. The bottom line is that when we talk less as instructors, the participants learn more. Facilitating involvement and encouraging participation is the key.
   
   a. Ask a question about every 10 minutes. Take time to listen to the answer, and ask others if they have something to add.

5. Help people leave with an action plan. One of the purposes of training is for participants to leave excited with what they now know, that they didn’t know before, excited about what they can now do that they couldn’t do before and with more confidence in their abilities to do this.
   
   a. In the beginning of the class, ask the participants to keep a list of things they learn and how they can use each one back on the job.

   b. When you need a change of pace ask an individual to share something on her list with the class.

   This process allows people to start taking ownership of the information being presented. They move beyond the classroom to application on the job.

6. Deliver a strong close. Often trainers don’t close; they just run out of time. A good close will tie things together.
Next, we develop our content selections into a “straw man.” A straw man is created as the starting point (or first draft) for reviews/revisions to occur in order to produce the final training product. The straw man/first draft is shared with other SMEs for their review and feedback (and revisions made as appropriate). The straw man is then developed into a training pilot and tested with a sample group of learners that includes a novice, a moderate, and a very experienced person to ensure the pilot accomplishes the training goal and the learning objectives.

4. Implement the Training Program. Our training program must include a management plan for scheduling, registration, tracking attendance, certification/testing, course materials for learners and the instructors, required technology, and location set-up.

5. Evaluate. Evaluation occurs AFTER EACH of the previous four steps to insure that we are accomplishing what we intend. Evaluations can occur in numerous ways. While an evaluation form will provide us with student feedback, analyzing post-test results will provide an indicator that learning occurred. In addition, if you measure a change in job performance, this will provide an indicator for how well the learning translated into a change in job performance. Regardless of the evaluation method, we should use the information/feedback to revise the training as needed to ensure continuous quality assurance.

Some people believe that once a training program is developed, their job is done. In actuality, developing a training program is only the beginning. A truly effective training program involves constant tweaking. We must continuously ask ourselves whether 1) the information conveyed is current, 2) the learning objectives are met, 3) the educational medium (online, classroom, manual, etc.) is effective, 4) the job performance is improving, etc.

Want to know more about instructional design methods and techniques? Simply search Google for “instructional design” for articles and other sources, or search “instructional design books” for a substantial bibliography.

In closing, remember that training requires a commitment of time and resources, but it also gets results. Best wishes for your continued training successes!
The Art of Successful Management*
Jerry Fife, Vanderbilt University

As I contemplated the topic for my first article as contributing editor, I had only to look at a book on my desk. A few weeks ago, I began reading *Lessons in Loyalty*, which describes how Southwest Airlines continues to be successful in an industry that has seen many companies fail. The book describes in detail, from an “insider’s” perspective, how Southwest hires, trains and retains employees. Consistently ranked by Fortune magazine as one of the top companies to work for and one of the most admired, Southwest has become a U.S. business phenomenon and its workplace culture a popular icon among industry professionals and the broader public. I am not going to review the book but rather take a couple of items highlighted in its nine loyalty lesson chapters, as well as from my own personal experiences, to discuss a few key attributes of successful managers. These concepts are applicable to the effective management of any organization, including research administration.

Successful Managers Understand that Good Employees Represent One of the Organization’s Most Critical Assets

One of my former colleagues used to tell me, “I can make a bad system run if I’ve got good employees, but I can’t make a good system run with bad employees.” While this statement may have some flaws, it illustrates the importance of hiring and retaining good employees. As managers, we owe it to the organizations we work for to hire the best employees and then work hard to train, nurture and retain them. Hiring the best means having patience and resolve. It doesn’t mean hiring someone you might consider average simply to get a position filled but waiting until you find an applicant that you are confident will become an excellent employee and then training and nurturing that person to ensure their success. I’d rather fight to retain a good employee than sacrifice my unit and my university with an employee whose skills, background and overall “package” may be marginal to the requirements of the position.

Show Employees that They are Highly Valued

It is important that employees know that they are highly valued. A simple but effective way to recognize this is to tell them. This can be done informally via a comment or more formally by a certificate such as “You were caught doing something good.”

Recognition should come not only during times of success but also when times are tough. Good employees make mistakes, and it is important that we remind them that they are highly valued during these times. Good employees will accept accountability, learn from the mistake and take steps to ensure that chance of reoccurrence.

* This article is reprinted from the *NCURA Newsletter*, Vol. 39, No. 2, April/May 2007, published by the National Council of University Research Administrators. It is used with permission of the publisher. Jerry G. Fife is Interim Vice Chancellor for Administration at Vanderbilt University.
rence is minimized. Good employees rarely require reprimands. They normally are harder on themselves then we would be anyway.

Compensation is another method of showing employees their value. Ok, I can hear you saying, “But we don’t have the money to give additional compensation.” Or you may be saying that compensation is not a primary motivator. I’ve said both of these in the past, but I’ve also lost good employees when a salary increase would have retained this employee. It is a fatal mistake to underestimate the cost of turnover to an organization’s performance when you have good employees.

Managers Must be Bold Enough to Let Others See That They are Human

Comments such as, “I need help,” “I made a mistake,” or “I don’t know” when used correctly by managers demonstrate to employees that you view yourself in a realistic way. All managers make mistakes and at times these mistakes involve not taking the advice of the employees which report to us. Consider the damage done when these mistakes are not corrected. Consider also the credibility we as managers gain when we admit to making a mistake and correct it with our employees.

Treat Employees in the Same Manner that You Would Like to be Treated

Lessons in Loyalty refers to this principle as “People Give as Good as They Get”. I can relate. Early in my career, I worked for a manager that was a former drill sergeant. His philosophy was that all employees would take advantage of the organization if given the opportunity. He would spend his time trying to catch employees doing things that, in his mind, would validate his philosophy. As a result, the organization was run in military fashion, and there was no trust between management and employees. It was a terrible environment. Employees were bullied constantly and management spent a great deal of time responding to employee grievances.

I have also worked for supervisors who led gently, fostered a culture of trust, supported their employees, demonstrated that they valued their employees, and readily admitted when they made a mistake. In short, they treated others in a fashion similar to how they would like to be treated. In this environment, employees excel and are not afraid to show initiative or question decisions if they believe it is not in the best interest of the organization. They also tend to extend this philosophy to customers!

Know When to Lead and Know When to Get Out of the Way!

I have been fortunate during my career to supervise many great managers. Among this group are two individuals in the research administration office at my current institution. Both are very competent, experienced, and well respected. The best thing I can do day-to-day with them is to let them know I am available, willing to help, and offer advice if needed. If no advice or assistance is needed, the best thing I can do is stay out of the way! Micromanaging these individuals would frustrate them, reduce productivity, and eventually drive them away. This is not to say that good managers shouldn’t maintain some high-level monitoring and follow up, but care must be taken not to over manage good employees.
In summary, managers are entrusted with hiring, training, nurturing, and retaining our organizations’ most critical asset. We need to do this in a fashion which lets employees know that they are a member of a team, are highly valued, and that they work with a manager that is human and willing to listen.

Oh, I forgot one other item; we should have fun while at work!
‘Human Capital’ Survey Questions

The following questions were developed as part of the National Science Foundation’s “human capital survey,” which is conducted regularly (see results at www.nsf.gov/pubs/2010/od10006/od10006.pdf). The survey questions may be useful for research administrators in formulating their own employee survey.

Personal Work Experiences

◆ Overall, how good a job do you feel is being done by your immediate supervisor/team leader?

◆ I have trust and confidence in my supervisor.

◆ The people I work with cooperate to get the job done.

◆ My work gives me a feeling of personal accomplishment.

◆ I like the kind of work I do.

◆ I am given a real opportunity to improve my skills in my organization.

Recruitment, Development, Retention

◆ The workforce has job-relevant knowledge and skills necessary to accomplish organizational goals.

◆ Physical conditions (for example, noise level, temperature, lighting, cleanliness) allow employees to perform their jobs well.

◆ The work I do is important.

◆ I know how my work relates to the agency’s goals and priorities.

◆ My talents are used well in the workplace.

◆ Supervisors/team leaders in my work unit support employee development.

◆ My training needs are assessed.

◆ My work unit is able to recruit people with the right skills.

Performance Culture

◆ In my work unit, steps are taken to deal with a poor performer who cannot or will not improve.

◆ Creativity and innovation are rewarded.

◆ Managers/supervisors/team leaders work well with employees of different backgrounds.

◆ Promotions in my work unit are based on merit.

◆ In my most recent performance appraisal, I understood what I had to do to be rated at different performance levels.

◆ In my work unit, differences in performance are recognized in a meaningful way.

◆ Pay raises depend on how well employees perform their jobs.
My performance appraisal is a fair reflection of my performance.

Discussions with my supervisor/team leader about my performance are worthwhile.

My supervisor supports my need to balance work and family issues.

**Leadership**

- Managers review and evaluate the organization's progress toward meeting its goals and objectives.
- Managers communicate the goals and priorities of the organization.
- I have a high level of respect for my organization's senior leaders.
- In my organization, leaders generate high levels of motivation and commitment in the workforce.
- Employees are protected from health and safety hazards on the job.
- My organization has prepared employees for potential security threats.
- My workload is reasonable.
- Employees have a feeling of personal empowerment with respect to work processes.

**Job Satisfaction**

- Considering everything, how satisfied are you with your job?
- How satisfied are you with the information you receive from management on what's going on in your organization?
- How satisfied are you with your involvement in decisions that affect your work?
- How satisfied are you with the policies and practices of your senior leaders?
- How satisfied are you with the recognition you receive for doing a good job?
- Considering everything, how satisfied are you with your pay?
- How satisfied are you with your opportunity to get a better job in your organization?
- How satisfied are you with the training you receive for your present job?
Is Mentoring Right for You? 1
Kathy Bir, University of Alabama and Rosemary Madnick, Los Angeles Biomedical Research Institute

Mahatma Gandhi said, “Be the change you want to see in the world.” What better way to accomplish this than by choosing to mentor others. Mentoring, as an integral part of leadership, can be particularly effective in achieving change and growth, organizationally and personally.

While in many organizations it is a supervisor’s role to manage and motivate individuals to achieve their performance goals, it is a mentor’s role to build trust, foster collaboration, provide ethical guidance, and foster an understanding of the environment around the mentee. More importantly, a mentor is an advisor, role model, teacher, and advocate and can ultimately become a life-long ally.

Although exemplary leaders use mentoring as a vehicle to lead, anyone can be a mentor. A successful mentoring relationship will help hone communication and leadership skills, bring new insight from different perspectives, and provide a sense of accomplishment.

Whether the mentoring relationship is formal or informal, successful mentors practice certain skills such as active listening, providing guidance, building trust, encouraging others and a consideration of other viewpoints. Mentoring is not only about sharing intellectual capital, it is a vehicle for others to advise, engage, and support. As described in the article “How Coaching and Mentoring Leverage Leadership Talent” by Maynard Brusman, mentors can adopt many styles, but one highly rewarding approach to the mentee is based on a style of inquiry rather than one that is directive or authoritative. One of the roles of a mentor is to challenge the mentee in their thought process thereby allowing them to reach their own conclusions as well as providing a path for self-discovery.

Performing a self-assessment will allow you to better identify and understand your ability to serve as a mentor and simplify the task of identifying a mentee. Some key points to consider include:

♦ Do you have a desire to share your experience and knowledge with others?
♦ What are some of your goals for mentoring?
♦ What are your strengths?
♦ What type of relationship do you want? Informal, formal, short-term, long-term?
♦ What expertise can you offer?
♦ Do you have the resources to become a mentor?
♦ How much time can you realistically commit? Weekly, biweekly, monthly?

1 This article is reprinted from the NCURA Magazine, Vol. XLI, No. 4, September/October 2009, published by the National Council of University Research Administrators. It is used with permission of the publisher. Kathy Bir and Rosemary Madnick are graduates of the 2008 NCURA Leadership Development Institute. Managing Editor: Ty Lane.
How are you going to meet? Face-to-face, e-mails, phone calls, or via other media?

Once you decide to be a mentor, match your skills and needs to the potential settings, opportunities and mentees. It is ok if you do not match perfectly, as long as you have a good rapport and share similar interests. When reaching out to a potential mentee, discuss how you would like to help them as a mentor, making sure to discuss their goals and objectives, assist in resolving problems, and provide guidance to achieve their goals and objectives. While both the mentor and mentee have certain responsibilities for ensuring the success of the relationship, it is important for the mentor to be available to the mentee or the relationship will likely fail.

Besides being knowledgeable and successful in their careers, common characteristics of excellent mentors include the desire to devote time to develop others and the ability to listen and act as a sounding board without being judgmental, provide constructive feedback in a timely manner, and network and be resourceful. As a mentor, one of the most valuable things you can do is to help connect your mentee with people, opportunities, and information that may otherwise be inaccessible to them. Additional mentoring skills of successful mentors include

- Be available to break the ice
- Build confidence and trust
  - Be available
  - Be supportive
  - Actively listen
  - Keep conversations confidential
- Offer guidance
- Be non-judgmental
- Allow for differing opinions
- Let the mentee make the decisions
- Assist in defining and achieving career goals
- Encourage and challenge mentee to reach goals
- Share experiences, knowledge, and best practices
- Maintain an attitude for free and open discussions
- Provide insight and perspective on how to achieve goals
- Open the door by providing new opportunities and introductions

Building an effective mentoring relationship is a process; therefore, establish clear expectations and boundaries to manage the roles and any problems, should they occur. Be clear that the mentee drives the relationship and that it is the mentee who identifies the goals and objectives to be achieved and communicates them to
you, the mentor. In addition, the mentee is responsible for communicating to the mentor whether his other expectations are being met.

Circumstances may arise that will not allow you the time to continue mentoring. If this occurs, discuss the situation as soon as possible and preferably in a face-to-face meeting. If your mentee determines to end the mentoring relationship for whatever reason, do not take it personally and remind them that you will be glad to be available to them in the future. Maya Angelou once said, “…people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”

Upon reflection of our experiences as recent graduates of the Leadership Development Institute (LDI), we have learned the value of mentoring and its importance in educating and training. We encourage you to accept the challenge to become a mentor for a period of one year or longer and experience the benefits that will last for both you and your mentee. Be prepared to be personally transformed by the relationship.
Knowledge Check

AIS editors

The Q&As at ¶590.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 500 has been understood. Note: For the answer key for ¶590.1, see ¶590.3, which appears on a separate page (page 590:5) for testing purposes.

Discussion topics at ¶590.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶590.1 Q&As

1. Tips for basic Web page design include all of the following EXCEPT:
   (a) Use few words: limit the page to a 20,000-word maximum.
   (b) Use categories or headers that are obvious and intuitive.
   (c) Sprinkle the page with considerable “negative space,” i.e., unfilled “white” space around words.
   (d) Employ a design that directs the eye to key elements.

2. Good writing has the characteristics of all of the following EXCEPT:
   (a) Varies the sentence type and length
   (b) Uses the active voice
   (c) Trims out excess
   (d) Conveys only simple, straightforward ideas

3. When communicating effectively, be sure your body language furthers your communication by all of the following EXCEPT:
   (a) Be careful to convey honesty, since the body may send signals that contradict spoken language.
   (b) To imply support for a speaker, avoid making direct eye contact or signaling assent by nodding.
   (c) Be aware of looking away or down, which conveys lack of confidence or disinterest in the other communicator.
   (d) Be aware of wrapping your arms around your body or covering your eyes, which convey conflict.
4. Some of the advantages in using multimedia as a communications tool include all of the following EXCEPT:
(a) Can deliver a complex message
(b) Can be used to reinforce your message
(c) Receiver “selects” medium
(d) Is usually the cheapest means

5. The “old speech teachers’ adage” about repetition in a message advises
(a) Repetition is often a good thing: “Tell the audience what you’re going to tell them. Then tell them. Then tell them what you told them.”
(b) Repetition is usually to be avoided. “Preface what you’re going to tell the audience. Then tell them. But don’t repeat what you just told them.”
(b) Repetition is often to be avoided. “Prepare the audience for what they’re going to be told. Then explain the importance of what you’re going to say. Then tell the audience.”
(d) None of the above

6. Typically, care in crafting the essential message involves all of the following EXCEPT:
(a) Knowing the subject and researching the problem as needed
(b) Finding a solution to the problem and recommending an action
(c) Precise planning of feedback mechanism
(d) Expressing the solution in attractive ways for the specific audience

7. Symbols and symbol systems are said to
(a) Mediate communication
(b) Complicate communication
(c) Impede communication
(d) Supersede communication

8. Metaphor is particularly helpful
(a) To identify with the audience
(b) When explaining highly specialized ideas
(c) To enliven a discussion
(d) When closing a presentation
9. Communication by definition is a two-way street, which often leads to the receiver of the original message becoming a sender and perhaps the sender modifying the original message in response. This is often referred to as

(a) The artful nature of communication
(b) The feedback loop
(c) Narrative or storytelling
(d) The “shelf life” of a communication message

Discussion Topics

1. Research administrators have many different “constituencies” with whom they must communicate? What is meant by this and who are your constituencies? How and why might what you say and which medium you use to say it to each group differ?

2. Time management is a critical skill for an effective research administrator to develop. What are your most effective time management practices?

3. There is a rhythm and flow to communications. Knowing this, how can you use this to your advantage when crafting an effective communication?

4. Job postings for research administration staff usually include the requirement “good communications skills essential.” How can you determine if a job candidate has the necessary skills?

5. The “how” and “why” of communication often changes quickly. Discuss how you office evaluates on a continuing basis both the methods and substance of the communications you office regularly engages in.

6. Research administration is generally thought to be a highly people-oriented profession. Do you think this statement is true? And if it is true, does that mean that there is no role in research administration at your institution for someone whose interpersonal skills are not as strong as their technical or financial skills?

7. Do you have a “deskbook” for use by departmental sponsored research personnel? If yes, how does the material in this reference differ from what is in a similar reference for central office staff and is the deskbook the same across all departments? If no, what do you think should go in such a handbook and should its content vary from department to department?

8. Some institutions maybe responding to the current economic climate in a variety of ways such as instituting pay cuts, pay freezes, furloughs, hiring freezes, buyouts, and layoffs. Regardless of how your institution may be responding, discuss the role of “communications” in keeping staff morale from deteriorating during this time.
1590.3 **Answer Key**

Following are the correct answers to the questions included at ¶590.1.

1. (a) Use few words: limit the page to a 20,000-word maximum.

2. (d) Conveys only simple, straightforward ideas

3. (b) To imply support for a speaker, avoid making direct eye contact or signaling assent by nodding.

4. (d) Is usually the cheapest means

5. (a) Repetition is often a good thing: “Tell the audience what you’re going to tell them. Then tell them. Then tell them what you told them.”

6. (c) Precise planning of feedback mechanism

7. (a) Mediate communication

8. (b) When explaining highly specialized ideas

9. (b) The feedback loop
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Introduction
Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter discusses requirements and strategies for effective use of information technology for sponsored research administration. Information technology — and its companion, electronic research administration — have become essential tools for research administrators. (For a full discussion of electronic research administration, see Chapter 900.)

Kenneth Forstmeier of Pennsylvania State University takes on the challenge of describing the application of “information technology” to the sponsored research office at an educational institution. Clearly, we live in the information age and the sponsored research office is a place where we are reminded of this many times each day. Forstmeier begins by describing the purpose of information systems as “aggregating, analyzing, and delivering” data that is considered useful by the recipient. He goes on to discuss organizational and staffing considerations in determining how best to structure information systems. Acknowledging that we are a long way from having “paperless” sponsored research offices, Forstmeier nevertheless looks forward to the time, perhaps not so distant, when extensive aspects of the business of research administration will be conducted electronically.

Forstmeier provides useful information on the respective roles of institutional IT organizations and sponsored projects IT functions. While the specifics of these arrangements will vary from one institution to the next, Forstmeier points out the sorts of issues we need to think about in implementing, modifying, or just living with the ways in which information systems services are provided.

For those readers who are not already highly knowledgeable and sophisticated in the complex, and occasionally intimidating, world of information technology, this chapter provides extremely nourishing and healthy food for thought.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶705, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶720), practical tools (at ¶730), case studies (¶740), and statistics and survey results (at ¶760). A “knowledge check” containing Q&As and discussion topics is included at ¶790.
Today’s professional athletes can achieve feats that were unimaginable thirty years ago. Innate athletic ability is an important factor in their success. However perhaps nearly as crucial to their sustained success is the scientific way that athletes and teams approach training, technique, and technology. The measure individual human performance efficiency (using ergometers to measure fitness), component efficiency (using structural analysis of athletic equipment), and overall system efficiency (by replicating environmental forces to adapt to them).

The emphasis on measurement and efforts to optimize system elements represents a radical departure from traditional preparations for athletic competition. For centuries athletic training had been a flying-by-the-seat-of-the-pants affair, and it is only in recent decades that science and measurement have been seriously applied to optimizing human performance.

Likewise, managing offices of sponsored programs, more often than not has traditionally been more art than science — and with good reason. The information for "scientific" decision making either did not exist or was difficult to collect and analyze in a timely (and so actionable) time frame. Just as technological advances have permitted accurate assessment of athletic performance, technological advances permit a research administrator to more accurately measure office efficiency. For the office of sponsored programs (OSP), this means the overall performance of individuals, processes, and the institution’s research enterprise can now be continually and periodically measured, monitored, and assessed.

This chapter briefly addresses some issues pertaining to information dissemination, including organization and staffing considerations, the resources needed in providing information systems, and how OSPs use the Internet. Also discussed is the use of information as a tool for measuring performance. Where other chapters of the Guide may generally deal with techniques and processes relevant to how offices of sponsored programs can or should work, this chapter focuses on methods to measure how well those processes are working. This chapter considers process metrics (standards for measuring performance) at several levels — from the individual negotiation to the individual negotiator or team, the office as a whole, and the overall research enterprise. When appropriate, tactical (day-to-day) and strategic (long-term) applications for information are also considered.
What Is ‘Information’?

For purposes of this chapter, the term “information” refers to the aggregation, sorting, or categorization of data; that is, how data can be made useful for the average person. In essence, then, the purpose of the “information systems” (IS) as discussed in this chapter is to bring data and people together in a manner that is meaningful. The system used to provide information includes both basic information technology (IT) infrastructure (hardware and software) and information-related processes (to include a system design that delivers the information required in reports needed by the user community).

Much, and perhaps the vast majority, of the information discussed in this chapter will typically be derived from data generated by transaction-based electronic research administration (ERA) systems, such as those used to create budgets, monitor proposal processes, or submit proposals. These transaction-based systems are those software applications that are used to conduct the business of offices of sponsored programs. The details (the data) generated by these individual transactions are the data that are aggregated, analyzed, and presented by information systems. These transactional systems are discussed in the chapter on electronic research administration and so will not be addressed here. (Although, practically speaking, it often is difficult to define where ERA ends and information systems begin. Indeed, a single software application may encompass both types of system activities.)

Note: The examples contained in this chapter are derived from the systems used at The Pennsylvania State University and are not intended to be prescriptive but rather illustrative. The reports are sample reports and not indicative of the entire range of reports available. The solutions a research administrator chooses for his or her institution may be quite different. Further, much as the information needs and the reports created in response to those needs at Penn State change over time, so too will any institution’s information needs.

Organization and Staffing

There are so many ways to organize the delivery of information — and the right approach for one institution may not necessarily work for another institution — that it is perhaps impossible to prescribe a single actionable organization and staffing model. This section will instead describe some factors to consider when developing an organizational and staffing plan for the OSP’s information systems.

There are four major issues to consider:

◆ The sophistication of the information system one is planning to use.
◆ The institution’s information technology organization and culture.
◆ The source of the system one is planning to use.
◆ The selection of system service provider.

The first consideration, the sophistication of the information system one is planning to use, is a critical consideration. If the institution has a relatively small research portfolio and few potential users of the system, the institution’s information system needs
may be completely addressed through the use of a simple spreadsheet housed on one computer workstation. On the other hand, if the institution has a somewhat larger research portfolio and numerous users, a more sophisticated software application (that is presumably Web-based) may be more appropriate.

The second consideration is the institution’s information technology organization and culture. Do individual institutional units provide their own IT support? Or is all IT support managed centrally? Or does some sort of hybrid system exist, combining elements of the first two models? Many offices of sponsored programs fall into the first category by default: For some inexplicable reason, many colleges’ and universities’ central IT shops tend to overlook the needs of offices of sponsored programs. By necessity such offices end up funding for themselves. For purposes of this chapter the term IT refers to all computer (hardware and software) technologies and computer professionals. The term information systems (IS) refers exclusively to the systems used to aggregate, analyze, and deliver information.

Obviously the more a sponsored programs office does for itself, the larger the IT staffing requirements will be for the office. If the office is located at a “non-IT-savvy” institution, help from outside the institution may be necessary. If the institution is IT-savvy and the central IT office agrees to it, the sponsored programs administrator has a choice whether to outsource or not.

The third consideration, the source of the system one is planning to use, as a practical consideration only comes into play if one is planning to implement a sophisticated information system. The fundamental question is: build or buy? If one chooses to buy a system, one can outsource some headaches (and gain some others), reduce the size of the IT staff, and (sometimes) reduce total cost of ownership. On the other hand, if the OSP builds its own system, the office will have complete control over the design and assume total responsibility for the life-cycle maintenance of the system. Using home-grown systems requires larger staffs than do purchased systems. However beware. *Purchased software requires staff to administer and maintain it; don’t make the mistake of buying a product and thinking expenditures are complete.*

The fourth factor in determining staffing needs is deciding who should host the system. The sponsored programs office can host (that is, manage) the software application (that constitutes the information system) itself, outsource it, or choose an application service provider (ASP) (really a subcategory of outsourcing). An ASP is a vendor that will host the system and data.

Depending on the OSP’s specific size and information needs, personnel with varied skills will be needed to maintain the system. However most OSPs will not require such staff services on a full-time basis. Their talents also could be used to support other, general IT tasks.

Finally, and this is probably the most important staffing issue to consider with respect to information systems, *if an office of sponsored programs can only hire one person, make sure it is someone skilled in both database design and administration.* Information derives from data, not from programs with fancy user interfaces. A simple database and a skilled database person will give one access, albeit unadorned, to the information that is really needed.
Figure 1 contains some general questions that may be useful in determining IT staffing needs. Figure 2 provides a case study of how one university’s research enterprise has satisfied its information needs.

**Figure 1: Determining IT Staffing Needs**

Every office of sponsored programs (OSP) will need to determine its own information technology (IT) staffing needs. The following simple outline may help an OSP to do so.

**OSP IT Staff**

- A simple spreadsheet will satisfy information needs
  - YES ➔ None
  - NO

- Institution’s central IT unit is willing to provide support
  - YES ➔ None
  - NO

- A third-party hosts the system
  - YES
    - IT staff: 1 project manager to work with the vendor and manage user accounts (possibly part-time)
  - NO

- Buy a system and host it
  - YES ➔ IT staff: 1 system administrator (probably part-time); 1 project manager to work with the vendor and manage user accounts (possibly part-time)
  - NO ➔ IT staff: at least 1 programmer/analyst; 1 database specialist; 1 system administrator (probably part-time)
Some years ago Penn State’s vice president for research mandated the implementation of systems for managing the university’s research enterprise. Penn State’s (science and engineering related) research and development expenditures for fiscal year 2003 were in excess of $533 million. The unit given the responsibility for delivering these systems is named the Office of Research Information Systems (ORIS). In addition to a director, ORIS has eight people organized into two teams: one team (administrative) maintains the IT infrastructure (including servers, firewalls, local area network and Internet connectivity, and workstations) and the other (information systems) designs, codes, and maintains the information systems (software applications and databases).

The administrative team consists of three system administrators who provide support to all the administrative units reporting to the vice president for research; these units include about 180 people, located in five buildings (separated by several miles) and 20 servers. Examples of the diverse units supported by this team include the offices of the vice president, sponsored programs, research protections, intellectual property, animal resource program, Penn State/Research (outreach and magazine), human resources, and finance.

The information systems team is composed of five people: three programmers, one database designer/administrator, and a single software tester and documentation writer.

In addition to maintaining the grants and contract information system, ORIS also has developed and maintains a system for managing the protocol approval process and a content management system that automates the creation of Web pages describing the institution’s research centers and institutes. ORIS is developing a new system that will permit faculty to monitor their project expenditures on a (nearly) real-time basis. ORIS also responds to ongoing incidental requests from staff for various custom reports.

One thing ORIS does not do is maintain Web site content. The unit does host (or manage) the sites for sponsored programs (and those of other units under the vice president for research) but does not maintain them. Units in the office of the vice president are individually responsible for maintaining their own Web sites. This serves a very pragmatic purpose; after all, IT people do not have the subject matter expertise to maintain the content for specialized offices. In the case of sponsored programs, one staffer is in charge of maintaining the office’s Web site and promulgating opportunity announcements.
1705.3 **Resources Required**

This section addresses the type of resources — not including staff — required of a sponsored programs office only for the delivery and analysis of information and not for tasks such as serving up a static department Web site. Because the information systems are electronic, the office will need computers. The question then arises: How many and of what type? The answer is straightforward: It depends. That may sound glib but how many and what type of computers an OSP needs really does depend upon what one wants to accomplish.

The following discussion will help a research administrator think through the process of determining his or her office’s computer hardware needs. Discussions of technology do not include recommendations for specific choices, because technology advances so quickly that any specificity offered would be obsolete by the time the chapter were printed.

This section instead addresses the components that could be associated with a typical information system used by an office of sponsored programs. These components include a variety of servers (for the database, application software, and Web site) and software (for the database, the software application itself, and the Web server). Depending on how an OSP’s information system is configured and what its information needs are, the system may or may not include all of the elements discussed.

**Databases and Database Servers**

This chapter is about information, and the information under discussion is derived from data. Hence the single most important information resource for a sponsored programs office is a database. In many cases the underlying information with which a research administrator will be working likely will be derived from the fusion of multiple data sources. For instance some of the reports the sponsored programs office may need will require that proposal and award-related data be combined with data from other institutional units (such as the human resources or business office).

Institutions with smaller research portfolios typically would not derive substantial benefit from the analytical capabilities of a complex database; typically, their needs could be well-served by spreadsheets and the analytical tools usually provided by the spreadsheet software. On the other hand, institutions with larger, heterogeneous portfolios can derive substantial benefit from the more sophisticated analyses that complex relational database software permits. The primary criterion to use for the selection of database software therefore is the size of the database. The more research the institution does, the more powerful the database software needs to be.

Perhaps a more interesting question pertains to the complexity of the database design. “Relational” databases are composed of a number of tables; the database software relates the data in these individual tables. It is by joining and sorting the data in the various tables that reports are generated. Although this is an oversimplification, basically the more ways one wants to look at and manipulate the data, the more complex the database design must be. (For example, the reports included as Figures 3-20 below were created using a relatively complex database.)
Depending on the size of the research enterprise, the research-related database supporting the enterprise might be hosted on a desktop computer, a departmental server, or even an enterprise server. A server is a shared, usually very powerful, computer on a local area network dedicated to handling a single task. A local area network comprises those computers that are interconnected and share local resources like user authentication services, file storage, and e-mail. An enterprise server is a server that supports users throughout the entire institution. (One potential area of confusion: The term server can refer to both the software and the hardware.)

In general, larger offices of sponsored programs will either maintain their own database server or ensure that they have ready access to one (either elsewhere at the institution or through a third party).

**Data Warehouses and Data Marts**

A “data warehouse” is really nothing more than a special-purpose database that is (generally) designed to make reporting easier or faster. If an OSP generates on a regular basis certain user reports, the OSP can use a data warehouse to reorganize the data in anticipation of the need for these reports. For example, when a proposal is submitted a large number of data elements (list of principal investigators, sponsor, total dollar amount, start date, and so on) are generated. Perhaps initially then the organizing principle surrounding these data is the proposal, but subsequently one might want to aggregate this data with other data and report according to sponsor, start date, or any other data element. The data warehouse provides the “prebuilt” infrastructure to accommodate these multiple reporting perspectives. Similarly data warehouses can also be used to aggregate data from multiple databases of various types.

In essence data warehouses are used to “preprocess” data to make it better conform to known reporting requirements. Because the “reorganization” is done ahead of time, the computer doesn’t have to devote as many processing resources to the task at the time the user makes his or her query, and the report is delivered more quickly to the user. Data warehouses archive information usually from a variety of sources to make it available for query by many users with differing data needs. In addition to making reporting easier and quicker, because data warehouses are generally hosted on a separate server, they tend to reduce the load on the computer hosting the transactional system (the source of the data), making the system faster.

“Data marts” are also databases designed for reporting, but they are generally even more focused in that they are typically used to serve a smaller user group or a more limited data set than the typical data warehouses. For the purposes of most offices of sponsored programs there really isn’t much difference between data warehouses and data marts. While the OSP’s IT staff may have occasions to access data warehouses or data marts, most of the time those warehouses and marts will be maintained by other units at an institution.

**Applications and Application Servers**

A good database administrator can provide all sorts of useful reports. However involving the “specialist” (the database administrator) every time a report is requested or needed may not be the best use of resources or staff time. To reduce the need for a
specialist’s knowledge, a software “application” could be added to the system. The application sits between the database and the user. Properly designed, the application increases the potential number of users who can access the information and will permit users to *self-serve* their information needs.

For a variety of reasons, often, but not always, the application is not hosted on the same server as the database. Therefore, if the research administrator decides to use an application program, an application server — or at least access to one — may be necessary.

**Web Software and Servers**

As we live in a Web-enabled world, the research administrator should make sure that the office’s information system application works on the Web. This requires Web software and a server. Fortunately this can (and often is) installed on the same hardware server that hosts the application server.

**Other Resources**

It is prudent to maintain a “failover” system (a server that automatically takes over if the primary server fails) or at least a “backup” system (manual replacement of the failed server) for the database and application servers. (See further discussion on security and recovery below.) If software applications are developed internally, development and test environments, including equipment, will be needed.

<table>
<thead>
<tr>
<th>How Many Servers Are Needed?</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Penn State, the Office of Research Information Systems (ORIS) is the unit overseeing information systems for the university’s research enterprise. ORIS manages 20 servers that provide assorted network services as well as a proposal and award system, a system used to help manage the protocol routing approvals, an intellectual property management system, a Web-based testing system, and a system that automatically generates Web pages describing the university’s centers and institutes. Those 20 servers also provide IT infrastructure services not directly related to the sponsored programs information system.</td>
</tr>
</tbody>
</table>

1705.4 **Security and Recovery**

No technology is 100 percent reliable; bad things sometimes do happen to computers. Therefore it is important to remember that an information system should include not only systems to minimize the likelihood of failure (“security”) but also systems and procedures to mitigate the impact of system failures when they do occur (“recovery”). A good security and recovery policy should cover the following four basic elements:

◆ **Network and data security:** Carefully consider the options identified for network and data security. (See discussion on the Internet below.) Outline a course of action. Remember that an ounce of prevention is worth a pound of cure.

◆ **Data backup:** Consider implementing local data backup systems like RAID (Removable Array of Independent Drives) as well as automatic backup to another physical location (an institution-wide service may exist already).
◆ **Hardware backup and failover systems:** Contemporary computer equipment is fairly reliable, especially machines built as servers. They will have redundant, hot-swappable components including removable arrays of independent drives, power supplies, and network interface cards (these connect the server, or any computer, to the local area network and the Internet). Nonetheless, if money is available, it is wise to maintain a failover server or at least a backup system for the database and application servers. A failover server is one that automatically and immediately takes over for a broken server. A backup server usually requires human intervention before it can substitute for a failed server. It is important to determine how long the unit can afford to be without its servers — can afford to be without the ability to deliver information services. Depending on the acceptable length of time, solutions can range from service-level maintenance contracts (for example, those providing 24-hour, seven-days-a-week backup) to clustered servers providing real-time failover (no interruptions).

◆ **Hardware maintenance:** It is important to keep production servers (those servers actually running the information system in contrast to backup or software development servers) under a maintenance contract. The contract should specify vendor response times and these should be appropriate to the research administrator’s level of risk tolerance. Because vendors often do not offer maintenance contracts for older computers (or they charge an exorbitant amount), plan to replace servers on a periodic basis. As a rule of thumb, plan on replacing production servers every five years. Of course after a server has been removed from production service, press it into other, less critical, duties.

### 705.5 Internet and the Office of Sponsored Programs

As the term “information system” is very broad, it is useful to categorize information systems in terms of how the information will be used. For information systems pertaining to sponsored programs, perhaps the first use for information will be to create an “information presence.” This usually is done via the Internet.

This section provides a survey of what might be characterized as run-of-the-mill uses of the Internet and covers

◆ disseminating routine information;

◆ electronic document storage or archiving, including related issues pertaining to document destruction; and

◆ system (including network, data, and user) security.

**Disseminating Routine Information**

It would be very unusual for today’s OSP to be without a Web site. At a minimum, the OSP Web site should present institutional procedures; contain links to federal regulations, circulars, and proposal guidelines; provide the institution’s sponsored research
forms (online forms should be interactive); and disseminate electronic notification of awards.

Even simply scanning hard copy award documents and e-mailing the resulting files to individuals or groups will save time and resources. It is important to note that whether the document was born digital (for example, an electronic notification of award) or scanned into a digital format, institutions may be required to maintain and secure them for a defined period of time (for example, as required for audits).

**Digital or Electronic Archiving**

It is critical that any office of sponsored research have an adequate process for electronically archiving research administration records. This particular activity is fraught with hidden complexity and the relevant technologies are not as advanced in this area as they are in other information systems arenas.

Perhaps the most basic consideration when implementing an e-archive system is establishing the “nonreputability” of documents stored in the system. This simply means that an auditor reviewing documents stored in the system should have confidence that the documents are unaltered — that they accurately represent the original document. This nonreputability can be achieved in two basic ways: first, the documents can be stored on a nonvolatile media like write once read many (WORM) disks, or second, through implementing a strict, programmatic auditing of all records. In either case it is important to safeguard both physical (with “locks”) and logical (with “strong passwords”) access to the system used to store the documents.

The next consideration in implementing an e-archive system is one that is often overlooked: documents must be “viewable” by (accessible to) authorized users. This isn’t a big deal if the document was created yesterday on current generation software, but what if the document was created using software written by a company that went out of business a decade ago, or if the software is otherwise no longer supported by the institution? One great thing about information written on paper is that the access technology advances at a rather manageable pace; one bad thing about electronic information technologies (including hardware) is that they advance at a rather less deliberate and comfortable pace. If the sponsored programs office chooses to maintain its records electronically, the research administrator must ensure that they remain accessible for as long as mandated by law, regulation, or institutional policy.

**E-mail.** E-mail presents, perhaps surprisingly, particularly thorny issues in terms of storage. Current case law — the law is still evolving — says that e-mail, as such, may constitute an institutional record (in contrast to the former generally accepted holding that e-mail was a form of “communication” and so did not constitute institutional records). As such, in addition to preserving the basic content of the e-mail, the institution must preserve human discernable addresses and e-mail
delivery dates and times.\(^1\) Therefore, simply cutting and pasting the content of an e-mail into a document management system for storage probably is not sufficient under this new legal interpretation. Access to e-mail becomes critically important during the discovery phase of any litigation in which an institution may be involved.

**Document Destruction.** Another important consideration in the electronic archiving area is document destruction. The problem with electronic documents is that it is entirely too easy to keep them — even beyond a policy-based destruction date. Why is this bad? Well, even if one has the right or obligation to destroy a document, if it has not been destroyed, an auditor — or anyone else — could ask to review it. This unnecessarily increases institutional risk.

Suppose a research administrator is conscientious about destroying documents according to policy. How does one destroy electronic documents stored on nonvolatile media such as WORMs, when the document to be destroyed is commingled with documents that must be preserved? Obviously the WORM disk cannot physically be destroyed until all the files it contains are “eligible” for destruction.

If the objective is recast from document destruction to preventing document retrieval, an easier-to-implement solution presents itself. When a document is to be “destroyed,” one can delete references (pointers) to the document being “destroyed” in the software that is used to manage access to the stored documents. In effect this makes the document irretrievable (or at least much more difficult to retrieve). Then when every document on a given disk is eventually “destroyed,” the disk itself can be physically destroyed.

**Network Security**

Network security is a subject that continually worries information systems administrators and one about which every organization that uses computers should be concerned. There continue to be antisocial individuals who seem to have nothing better to do than disrupt other people’s work by playing with “viruses.” A virus is a software program that is capable of replicating itself to cause harm to an information system.

In the last couple of years, though, the threat environment has worsened. A “cracker” is someone who illegally “cracks” into someone else’s computer by accessing passwords or who “cracks” the copy protection of software. There is a new breed of crackers who have found ways to make money by either writing malicious software or selling access to an institution’s or person’s computers over which they have taken control (so-called “zombies”).

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\(^1\) *Armstrong v. Executive Office of the President, et al.* and *Public Citizen v. Carlin* are perhaps the most notable. Locate *Armstrong* on the Web at [http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=dc&navby=case&nro=955377a](http://caselaw.lp.findlaw.com/cgi-bin/getcase.pl?court=dc&navby=case&nro=955377a). *Public Citizen v. Carlin* can be found at [http://news.findlaw.com/hdocs/docs/gwbush/ahanara112801cmp.pdf](http://news.findlaw.com/hdocs/docs/gwbush/ahanara112801cmp.pdf). Also, while it is not yet law, there are indications that the “Uniform Rules for Electronic Discovery” may require that all e-mail (including routing data) be preserved in case of future lawsuits referencing the e-mail. Such discovery rules for e-mail would impose a substantial archival and retrieval burden on research administrators (as well as many others).
Any research administrator must be concerned about computer system and network security in order to keep the information systems running and prevent them from being used or accessed by criminals. It is no exaggeration to say that an unprotected computer (one with no firewall or patches) connected to the Internet can be compromised in minutes.

Presented below is simply a “laundry list” of network security issues that serves to highlight the importance of this topic and give a research administrator an overall understanding of some security options. As with all effective defenses, the architecture suggested is “layered” (discussed in turn ranging from the inside “layer” to the perimeter of the network). The following four basic practices will enhance network security.

1. **Patch all of your computer systems and keep them patched:** This is perhaps the most important rule of network security. Contemporary software is very complex, so complex that it always contains errors or bugs; some of these errors can be exploited by malefactors to gain access to computers (and data). When software vendors become aware of such errors the “fix” they provide is called a software “patch.” Today, an “unpatched” computer can be taken over by a criminal in minutes — and often without the owner ever knowing about it. Patching systems will substantially reduce exposure to risk by eliminating vulnerability.

2. **Install antivirus software on the network and on workstations:** “Malware” (malevolent software, including viruses) can enter computers through any of several “avenues.” Currently the most common is e-mail attachments. By installing antivirus software and using automatic updates on an e-mail gateway and on individual workstations, exposure to risk will be reduced significantly.

3. **Protect the network with security appliances (such as firewalls, intrusion prevention systems, or intrusion detection systems):** Another significant avenue for the introduction of malware into computers is by exploiting the infrastructure used by computers to communicate with the Internet. Computer-to-computer communications is defined by the endpoint on each computer. These endpoints are called ports — think of ports as the doorways into a computer. There are thousands of ports and what the bad people do is use computer programs to look for (called port scanning) open or unguarded ports (think unlocked door). When they find a vulnerable port, they use that opening to install malware on a computer.

   A network-based firewall provides an outer defense that, if properly configured, will further and substantially reduce vulnerability. A network-based firewall does this by preventing computers outside of the network from communicating with those inside of it by, among other mechanisms, restricting the use of specified ports. A good firewall permits the network administrator to define who and what type of Internet traffic should be blocked. Firewalls can also be configured to block outgoing traffic; this can prevent the spread of viruses if the network has been compromised. Of the various security appliances available, the one that will provide the most immediate benefit is the firewall.
Implement and maintain strong passwords: All the patching, firewalls, and antivirus software in the world will be of little use if users don’t use “strong” passwords and keep them secret. A strong password is a complex password system that

◆ is of eight or more characters in length;
◆ includes uppercase and lowercase letters, numbers, and special characters;
◆ is not a real word in any language; and
◆ makes a user change his or her password every so many days.

Under such circumstances, passwords are hard to remember, but it is precisely the complexity of strong passwords that makes them hard to crack. The metric used to measure password strength is called “entropy”; the more entropy a given password has, the more difficult it is to break or decipher. Most authentication systems provide mechanisms to ensure that passwords comply with whatever policy is established.

Data Security

If network security keeps research administrators up at night, add data security to the mix, and no research administrator will ever get any sleep. There are some types of data that must be protected under the law (for example, social security numbers) and other types that must be protected according to institutional policies (this obviously will vary). The obligation to protect systems’ data is serious, so serious that data security should be a concern from the moment data is first stored on the office’s computers to the day the storage media are wiped clean. Similarly access control should be an issue from the moment one starts thinking about making sponsored research programs data available through a Web-enabled system.

While the technical security issues described in this discussion are critically important, it is essential to recognize that most data leaks are not the result of a technical attack but rather perpetrated by disgruntled insiders (employees) or trickery. Trickery could involve an unauthorized person seeking access to data by trying to trick an employee into divulging his or her password through “phishing” schemes (e-mails or phone calls purporting to be from — but not associated with — an official institutional unit asking for user name and password, for example, to verify/test/reset a system). Sponsored programs administrators should instruct staff and system users to never, ever, give out a user name and password and ensure that all users understand the reasoning behind this critical precaution.

The basic issues surrounding data security include

◆ authentication (establishing that a given user is who he or she says he or she is);
◆ access control (once the user has established himself or herself, defining what information is available to the individual); and
◆ encryption (ensuring that a person “eavesdropping” on or electronically monitoring the transmission of sensitive data cannot decipher useful information).
User Authentication. As a general rule, instead of establishing an authentication system unique to the sponsored programs office (and having to manage it and potentially annoy users with yet another user ID-password pair they have to keep track of), it is best to use whatever authentication system is in general use at the institution. Most authentication systems provide mechanisms to ensure that passwords comply with whatever password policy is established.

Access Control. Access control, regulating who gets to see what data and what they can do with that data, is something with which a research administrator, as steward of the data, must be concerned. This chapter is not the appropriate venue for an in-depth technical discussion of access control, but it is appropriate to highlight here some of the differences between controlling access to hard copy data and databases. Perhaps the single biggest difference is that database technology permits an administrator to introduce finer “granularity” to controls than is available in the print world. It turns out, perhaps counterintuitively, that by using more “granular” (item-by-item or person-by-person) access control, more people can have access to the data (or at least portions of the data) while control over the data is still maintained.

Access generally is controlled by giving individual users (or groups of users) specific rights to access specific data elements (or groups of data elements) in specific ways. (A “data element” is a basic unit of information that has a unique meaning, such as sex, age, time period, or geographic location.) User rights can be derivative of some user attribute (for instance, certain users may only have the right to access records relevant to their own colleges or departments). On the other hand, one might also want to control access to data elements for which there is no easy way to derive access rights. For example, one might want to control access across the board to a data element like salary information. In this case a research administrator could explicitly assign rights to individual users (either by individually assigning access rights or assigning them to user groups that have predefined or predetermined sets of access rights).

The benefits of granular access control are many, but there are also costs. In the long term, there are increased administrative and maintenance costs; in the short-term, there are increased programming costs. It is up to the research administrator to determine what level of cost and access control is acceptable.

Data Encryption. Not only are there bad people in the world who want to break into an institution’s computers (formerly just for fun and now increasingly for profit) but some also are very interested in the data the institution’s systems contain (for, among other reasons, identity theft and industrial espionage). In addition to breaking into computers, evildoers will also attempt to eavesdrop on data being transmitted over the Internet. The countermeasure to this is straightforward and not terribly costly: Encrypt all data sent over the Internet and of course maintain physical security on edge switches and routers (the “stuff” in your telecommunications closet).

In the case of a Web site, one can purchase a “certificate,” a bit of software that establishes and assures the “identity” of the computer (from Verisign, Thawt, and other vendors) and install it. From then on (presuming the subscription is kept up to date),
the data sent out on the Internet will be encrypted from the server to the user’s browser. Be sure people accessing any Web pages (or systems) that contain sensitive data are being authenticated — it would be foolish to encrypt the transmission of sensitive data without also authenticating users.

### 705.6 Generating Reports

For an information system pertaining to sponsored programs, it is useful to examine three main categories of uses for information:

- To manage the office
- To manage the research enterprise
- To satisfy the needs of others to understand and access the research enterprise

This section discusses how a research administrator can manipulate data in order to generate reports to assess and manage the OSP — its people and processes. Further, as steward of proposal and award data, the research administrator will need to assist others at the institution who have various reporting requirements or information needs. While it is not essential, as a practical matter, most reporting will be done over the Internet. Some types — but certainly not all types — of reports for a variety of research-related purposes are discussed below.

Readers are reminded that the reports contained in this discussion are derived from the systems used at The Pennsylvania State University and are provided as examples of the type of reports that might be useful to an office of sponsored programs. The reports a research administrator chooses or needs for his or her institution may be different from the ones discussed below.

### Managing the Office

A research administrator will want to measure how well the OSP is performing. Once a research administrator understands the efficiency of individual staff members, teams, and processes, he or she will be in an excellent position to analyze overall processes, develop and implement improvements, and measure the results of any such implementations. This section discusses ways to use information systems to measure and manage performance.

**Process Optimization and Metrics.** One can approach “optimizing” or accessing and improving office processes in either an *ad hoc* manner or empirically. Either approach can yield success but only an empirical approach can validate success. And, only an empirical approach can be used to objectively document individual performance.

As a manager the first thing to decide is what to measure, and then second determine what metrics (“measurements”) can be used to generate this information. Determining what to measure depends on what the objectives are and is not a terribly difficult task but it will take some time. There is a tradeoff: The more one measures, the more one can analyze, but also the more burdensome data collection becomes.

Metrics can be applied to personnel or services. They frequently are collected consistently over time and can be used for trend analysis and projections. Metrics are
an excellent management tool for looking at how the office is doing currently and providing a basis for future direction. Strictly speaking, electronic systems aren’t necessary to provide office performance metrics but from a practical perspective, they really are. Sample reports to assess some basic metrics are included as Figures 3-6 and discussed below.

One could argue endlessly over whether a particular set of metrics is the best or whether particular methods of measuring performance are statistically optimal, but such discussions aren’t terribly productive. So long as the metrics chosen are reasonable, one will be able to derive actionable information about office efficiency and then, later, the effectiveness of any changes made to improve efficiency.

A very basic metric that can be used to determine an office’s processing efficiency is the number of days it takes to complete a negotiation. Penn State’s information system tracks the number of days that elapse from the time an agreement is entered or logged into the system (the first substantial internal transaction after the notice of award) until the negotiation is completed and an account is ready to be created (referred to as “to contract file”).

This metric, considered retrospectively for an individual negotiation, can provide some insight into how well that particular negotiation proceeded. When this data is aggregated and examined from numerous negotiations (over a given time period), a picture of the office’s overall performance emerges. This aggregation could be expressed in terms of the number of negotiations completed for each negotiation interval (one day, two days, three days, etc.). Clearly such a data set, comprising upwards of two hundred data elements (one for each interval), would be difficult to analyze.

One can better manage the proliferation of data points by further grouping the performance data into sets or “bins” that correspond to negotiation lengths that have some meaning. For instance, at Penn State eight bins are used to characterize negotiation efficiency. (Some might argue that the use of bins of varying size will distort the analysis; in an absolute sense this is true, but the purpose here is to gain an overall understanding of negotiation status, which does not necessarily require statistical purity.) Figure 3 shows some sample Penn State contracts negotiation data organized in this way.

This report alone provides a nice enough “snapshot.” However when reviewed in light of or compared with additional performance data — such as from last year, prior

<table>
<thead>
<tr>
<th>All Sponsors</th>
<th>1-7</th>
<th>8-14</th>
<th>15-21</th>
<th>22-28</th>
<th>29-59</th>
<th>60-89</th>
<th>90-179</th>
<th>180+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Sponsors</td>
<td>1441</td>
<td>383</td>
<td>274</td>
<td>222</td>
<td>292</td>
<td>94</td>
<td>94</td>
<td>38</td>
<td>2838</td>
</tr>
<tr>
<td>All Sponsors-Percent</td>
<td>50.8</td>
<td>13.5</td>
<td>9.7</td>
<td>7.8</td>
<td>10.3</td>
<td>3.3</td>
<td>3.3</td>
<td>1.3</td>
<td></td>
</tr>
</tbody>
</table>
to a reorganization, etc. — the report begins to take on real value because trends can be
identified or the impact of changing workloads or processes can be assessed. One
important job of management is monitoring the changing efficiency of the office to
courage improvement and address backsliding at the earliest opportunity. A series of
snapshots such as the one provided in Figure 3 can provide the information a research
administrator may need to stay on top of office efficiency.

Figure 4 examines the data by sponsor type. This sort of breakdown is interesting
because it permits one to consider whether or not the differences in performance across
sponsor types are reasonable or unreasonable. Here qualitative, as well as quantitative,
assessments (for example, how difficult or complex a given negotiation is) should be
factored in when evaluating the data.

Figures 3 and 4 look at relatively coarse metrics; certainly, over time there may be
changes in performance that do not significantly shift the distribution from bin to bin
(data sets to data sets). In these cases one might find it interesting to see what the
average performance is in each bin. This is shown in Figure 5. Of course this same
approach can be used to assess any definable functional element of the office whether it
is a team (unit-based, sponsor-based, or otherwise-based team) or an individual.

| Figure 4: Days to Contract Account Creation Authorization |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| SPONSOR TYPE   | DAYS  |
|                | 1-7   | 8-14  | 15-21 | 22-28 | 29-59 | 60-89 | 90-179 | 180+  |
| Industry       | 436   | 169   | 102   | 65    | 106   | 34    | 45     | 18    | 975   |
| Industry-Percent| 44.7  | 17.3  | 10.5  | 6.7   | 10.9  | 3.5   | 4.6    | 1.8   |
| Federal        | 646   | 85    | 60    | 42    | 50    | 14    | 10     | 5     | 912   |
| Federal-Percent| 70.8  | 9.3   | 6.6   | 4.6   | 5.5   | 1.5   | 1.1    | 0.5   |
| State          | 110   | 57    | 64    | 59    | 58    | 10    | 9      | 2     | 369   |
| State-Percent  | 29.8  | 15.4  | 17.3  | 16.0  | 15.7  | 2.7   | 2.4    | 0.5   |
| Other          | 249   | 72    | 48    | 56    | 78    | 36    | 30     | 13    | 582   |
| Other-Percent  | 42.8  | 12.4  | 8.2   | 9.6   | 13.4  | 6.2   | 5.2    | 2.2   |
| All            | 1441  | 383   | 274   | 222   | 292   | 94    | 94     | 38    | 2838  |
| All-Percent    | 50.8  | 13.5  | 9.7   | 7.8   | 10.3  | 3.3   | 3.3    | 1.3   |
One important aid for optimizing office performance is the ability to “expose” (show or determine) individual and team workloads. Figure 6 is a screen shot of Penn State’s daily log report. In this case it is a daily log report for an individual; various attributes of the assignments are listed that permit supervisors to monitor productivity, distribute the load fairly, and assess portfolio status. (As a side note, Penn State plans to add a qualitative element to the exposure of workload data by assigning a weight to the various negotiator tasks that are tracked. For example, a low-weighting factor would be assigned to processing a no-cost extension, while a negotiation with an industrial sponsor with extensive intellectual property implications would be assigned a high-weighting factor.)

**Building Trust Through Transparency.** Trust makes relationships more successful, and in a business environment there are few better ways of engendering trust from customers than by exposing the service provider’s process metrics. An efficient manager of an office of sponsored programs is already tracking the office’s efficiency, so it is relatively easy to share these data with customers as appropriate. There is risk however. Transparency engenders accountability and some members of the staff may

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**Using Data To Assess Efficiency**

Several years ago, in an attempt to improve process efficiency, Penn State’s associate vice president for research reorganized the office of sponsored programs. Some insiders predicted that immediately after the reorganization process efficiency would decline (as people learned the new ropes), and then gradually the level would rebound to the original efficiency level before eventually improving beyond the baseline. It turned out that the conventional thinking was wrong; process efficiency improved beyond pre-reorganization levels in just two or three weeks. The data available clearly backed up this rapid (and un-anticipated) improvement in efficiency.
be uneasy at the prospect of such public visibility. Before implementing such a policy, one should be sure to anticipate what may be significant staff resistance and be prepared to address any concerns that surface. However it is important not to underestimate the customer service benefits of increased trust that transparency can create. Further, when presented with the facts, potentially hostile customers often can be assuaged.

At Penn State selected negotiation data is “proactively” exposed. For instance, in cases where it has been over 28 days since a grant or contract has been logged into the system without it being either awarded, not funded, or withdrawn, an e-mail is automatically generated and sent to both the negotiator and relevant personnel in the college and/or department. This process occurs again at the 60-day mark. Once an e-mail has been sent, the sponsored programs negotiator is expected to personally follow up with all interested parties to explain the reason(s) for the delay in completing the negotiation.

In addition to tracking negotiation closing time, Penn State’s system also tracks the status of negotiations. The negotiation status includes additional detail on the current state of the negotiations, summaries of meetings, copies of e-mails, and logs of phone calls. Sometimes it’s the office of sponsored programs, sponsor, college, department, or faculty member who is responsible for the delay; whatever the case, often emotions can be divorced from the problem and solutions can be sought in a (more) objective manner when the facts are on the table.
Figures 7 and 8 show two slices of Penn State’s “Negotiation Manager” software interface. The first presents the summary status for a negotiation; the second presents the history of the negotiation. Taken together, the two screenfuls of information provide a window into the current status and the history of any particular negotiation. At Penn State these records are maintained by the sponsored programs staff but are visible to the relevant college and departmental research administrators; this availability dramatically improves communications. These sorts of negotiation histories also can prove useful during follow-on negotiations.
Managing the Research Enterprise

Just as data is needed to evaluate the day-to-day performance of a sponsored programs office, data also is important in evaluating the longer-term performance of an institution’s research enterprise. A research administrator (and others at the institution) periodically may want to know: “How does my institution stack up?” In today’s information environment there are few excuses for a research institution not to have a firm grasp of its research portfolio and the portfolio’s performance in relation to changes in available funding.

At a minimum a research administrator should understand the research portfolio in terms of funding source categories (e.g., federal, industrial, and foundation) and the respective amounts of funding. This sort of “quick” analysis can provide a clear snapshot of the overall research enterprise. It is recommended that the information systems be designed such that users have the ability to view information down to the individual sponsor level.

While such snapshots are useful, it is perhaps more important to understand funding trends. For instance, if the institution receives significant funding from the...
National Institutes of Health (NIH), a research administrator might want to look at the institution’s funding levels together with the NIH budgets (that is, the NIH budget history, current budget, and proposed budgets — presidential, Senate, and House versions) for extramural research. Then it becomes easy to see how the amount of NIH research funding the institution receives correlates with the overall NIH budget for extramural research. If the institution’s funding does not track the NIH funding profile, the institution is either doing something very right — or very wrong.

**Return on Investment.** One mission of research-intensive institutions is to create new knowledge. Unfortunately much of today’s science is big — big and expensive. The high cost of scientific research compounded by limited institutional financial resources, for all practical purposes, forces research universities to adopt a model with some businesslike characteristics when allocating funds to research initiatives competing for institutional support. For example, although each initiative must first be evaluated on its scientific merit, after scientific merit has been established, research initiatives could be considered in terms of investment potential.

Like any business, research institutions are looking for a return on their investments; unlike for-profit businesses, however, research institutions seek a return qualitatively different from that sought by the average capitalist. A research institution does not seek profit, but rather to increase the size of its research portfolios so that it can do more research — to generate more knowledge.

Given that an institution has limited resources, the only way to grow the research enterprise efficiently is to convince others to fund the research. It is indeed unfortunate that external sponsors often seek to decrease their risk by preferring to fund research initiatives from institutions that can demonstrate some level of research maturity or potential for success. Simply stated, new research initiatives require start-up or seed funding in order to prove themselves worthy of external funding, and often the only source for this seed money is the institution itself. The looked-for return on the investment of seed funding by an institution is an increase in external sponsorship. The objective is to make research initiatives self-sustaining (as a result of external support), and then institutional funding can be reallocated to other initiatives.

An institution may be trying to leverage an area of research in which it already is a major player or it may be attempting to build up an area of research in which it is deficient. Although it is easy to evaluate whether a given proposal succeeds or not, it is far more difficult to measure the success of a broader research initiative or area of research focus. However, information systems can prove helpful in this endeavor.

It can be difficult to determine which portion of the incoming award should be allocated to a given research area. This is particularly difficult in an era of multidisciplinary and interdisciplinary research where any given award might be funding research in multiple areas. It is axiomatic that multidisciplinary projects correspond or map to existing departmental structures on a one-to-many basis and that those mappings are not always obvious. It is an even greater problem to map interdisciplinary projects because, by definition, there are no existing departments that correspond directly (or completely) to the focus of the project.
To accommodate these interdisciplinary initiatives, Penn State has superimposed another “structure” on top (or perhaps alongside) of existing departmental structure, which allows for the capturing of additional data on these initiatives. Award “credit” is distributed among strategic research categories (as institutionally defined). Once these assignments or distributions are made, it is simple to make year-to-year comparisons and develop a sense of what the return on the institution’s investment is. Although Penn State’s system has a variety of ways to display this type of data, one popular report is shown in Figure 9.

One initial objection to the report shown in Figure 9 was that it would be too difficult to persuade faculty members and research administrators to provide these data. However since implementation (fiscal year 2001-2002), the level of compliance has been remarkably high and consistent. What makes this cooperation even more surprising perhaps is that the institution also asks that credit be distributed among the participating faculty members. Figure 10 shows the data-entry screen for this assignment of credit.

**Increasing Nonfederal Support.** Many institutions derive a significant portion of their research portfolio from industrial sources, and most institutions are very interested in increasing this component. One way to attempt to increase this share is to focus on two categories of sponsors: those who are already large supporters and those who possibly can be converted to large supporters.

Because it is often easier to keep a sponsor than to capture a new one, it is vitally important that current major industrial supporters of research be identified and that concerted efforts be undertaken to keep them in that category. A research administrator can foster and expand the relationship with external, nonfederal sponsors armed with key knowledge about the sponsor obtained from the OSP’s information systems.

Figure 11 exposes Penn State’s best industrial customers to whoever needs to know about them. Perhaps what’s most important about this report is that it can provide this sort of information in a “context-specific” or “context-sensitive” manner. That is, in a manner that cuts or slices and presents the data according to user needs. Staff at different units and different levels of the institution will require different cuts of the data. For example, while the vice president for research or the director of corporate philanthropy
might want to know about the university’s overall “top ten” sponsors, the associate dean for research for a college most likely will focus on his or her unit’s “top ten.” It is important to remember that to be truly effective, information must be provided in a context-specific manner.

**Figure 10**

![Figure 10](image10.png)

**Figure 11**

![Figure 11](image11.png)
A report similar to Figure 11 addresses the institution’s interest in the second category of corporate sponsors: those sponsors whose money the institution is attempting to grow. How one “populates” this report, in other words how one determines what sponsors are being looked at, must be user-defined (where the user selects the sponsors to report on).

Who might use the data presented in Figure 11? Vice presidents for research and associate deans for research, of course, but also staff in both university development (corporate philanthropy) and industrial relations (industrial sponsorship) need to be able to portray the breadth of the relationship that exists between the institution and any given corporate partner. The only difference between this sort of report and “canned” or “predefined” reports is that the individual user defines which sponsors to add to his or her list of sponsors to track and this list is maintained in the user’s profile so that it need be defined only once. (The only caveat is that only sponsors who have been defined in the system can be selected for the user-defined list.)

Understanding the Research Enterprise

Again, as discussed above, data is valuable in evaluating or managing an institution’s research enterprise. It is also important in helping various constituent groups understand or assess the research enterprise. Providing information to users, in the form of reports, is one of the primary reasons OSP information systems exist. Users will undoubtedly require many other reports than are described in this discussion. The “take-home” message from all of these reports is that users should be able to directly access research trend information without having to interact with the research office’s IS staff. In other words, the OSP staff should maintain the boat, engine, and tackle; the users should do the fishing.

Basic Institutional Reporting. Because many of the reports requested by a research administrator’s many “constituencies” are routine (that is, most users ask for the same type of reports on a regular basis) effective use of information systems can put the information in the hands of the customers and enfranchise them to serve themselves. This is done in three ways.

First, one can provide any number of standard reports and permit users to access them. At Penn State users are permitted to access such reports in the dashboard-like interface shown in Figure 12. The users display only the reports they want in their user environment and these settings are maintained in the user’s profile.

Second, one can provide users with an interface that permits them to create their own queries. Because the average user is not a database specialist, the interface provided should be easy to use, which means the user should be able to use the database without needing to know any standard query language or understand the database structure. Because users tend to rerun the same queries, it is very helpful and efficient to enable users to store their queries for reuse. Figure 13 shows the screen used to define queries at Penn State.
Third, there will be occasions where neither standard reports nor a customized query will provide the flexibility to satisfy user needs. In these cases, provided the data exists, a research administrator can create so-called predefined reports that users can then access like custom reports. While users cannot self-serve predefined report definition, once the report is created by programmers, users can self-serve report generation. These reports also can be designed to require user input at runtime (for example, the user can request certain date ranges or other query parameters). Figure 14 shows the screen used to access predefined reports at Penn State.

![Figure 14](https://dev.sims.psu.edu - SIMS Custom Report Manager - Microsoft Internet Explorer)

**Figure 14**

The screen used to access predefined reports at Penn State.
**Enterprise Metrics: Performance.** It is important to recognize that as steward of proposal and award data, the research administrator may have different stakeholder groups that have vastly different information needs. Senior executives often don’t need (or want) detailed reports; they need information aggregated in forms that quickly convey the information they seek. But in aggregating such data, a context also needs to be provided.

Figure 15 shows an “Executive Award Trend” report, which provides three year-to-year comparisons that convey the health of the research enterprise at a glance. The three comparisons exposed (year-to-date, current month-to-date, and prior month)
integrate the award data over three defined periods so that yearly and more recent trends can be easily discerned. The upward and downward pointing arrows assist stakeholders to more easily track trends.

Current-year/last-year comparisons are very useful (and are requested by many types of users), but on a fairly regular basis customers require multiyear comparisons to assess longer-term trends. Figure 16 shows a report addressing this need that Penn State makes available to all users.

What is perhaps more instructive than the report itself, is the fact that the user is permitted to define both the number of years to compare and the specific portion of the year that is being compared year-to-year. (See Figure 17.)

It is a sad characteristic of research funding that the amount of yearly funding can be somewhat uneven due to the vagaries of the federal funding cycle. The occasional huge, multiyear center award can introduce unsettling (and relatively meaningless) discontinuities in year-to-year trends. The impact of these discontinuities on users looking at year-to-year funding trends can be substantially reduced by multiyear averaging. Penn State uses three-year running averages (where the values for any

**Figure 17**

![Image of PENNSSTATE SIMS interface showing multi-year faculty participation award summary range with fields for Begin Date, End Date, and Number of Years, and a note that the user can define a non-standard time period for multi-year faculty participation award summary comparisons, with an example setup and note that the report comparing the January awards for 1998, 1999, 2000 would return for release to the public.
Figure 18

**Faculty Participation Award Summary: 3 Year Average**

<table>
<thead>
<tr>
<th>College/Unit</th>
<th>7/03 - 9/05</th>
<th>7/02 - 9/04</th>
<th>7/01 - 9/03</th>
</tr>
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<tbody>
<tr>
<td>Agricultural Sciences</td>
<td>$15,841,807</td>
<td>$14,821,803</td>
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<td>Arts &amp; Architecture</td>
<td>$311,461</td>
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<tr>
<td>Business Administration</td>
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<td>College of Communications</td>
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<td>Earth &amp; Mineral Sciences</td>
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<td>Education</td>
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<td>Health &amp; Human Development</td>
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<td>$10,420,310</td>
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<tr>
<td>Information Sciences &amp; Tech.</td>
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<td>Law School</td>
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<td>Liberal Arts</td>
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<td>$25,192,470</td>
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<td>Medicine (non-Hershey) (as of 03/29/2005)</td>
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<td>$0</td>
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</tr>
<tr>
<td>- Clinic</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>- Human/Animal</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Science</td>
<td>$16,946,948</td>
<td>$17,493,943</td>
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**Commonwealth Campuses**

<table>
<thead>
<tr>
<th>Campus</th>
<th>7/03 - 9/05</th>
<th>7/02 - 9/04</th>
<th>7/01 - 9/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abington College</td>
<td>$563,402</td>
<td>$567,727</td>
<td>$840,430</td>
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<tr>
<td>Altoona College</td>
<td>$160,567</td>
<td>$214,174</td>
<td>$236,641</td>
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<tr>
<td>Berks College</td>
<td>$121,365</td>
<td>$236,611</td>
<td>$254,669</td>
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<tr>
<td>Capital College</td>
<td>$1,110,537</td>
<td>$1,193,270</td>
<td>$933,573</td>
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<td>Other Commonwealth Campuses</td>
<td>$2,265,781</td>
<td>$2,529,178</td>
<td>$2,926,214</td>
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<tr>
<td>Penn State Erie, The Behrend College</td>
<td>$1,135,118</td>
<td>$1,122,833</td>
<td>$736,134</td>
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**Defense-Related Research Units**

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<th>Unit</th>
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<th>7/02 - 9/04</th>
<th>7/01 - 9/03</th>
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</thead>
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<tr>
<td>Applied Research Laboratory</td>
<td>$24,159,867</td>
<td>$20,083,809</td>
<td>$13,456,496</td>
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<tr>
<td>Electro-Optics Center</td>
<td>$13,453,175</td>
<td>$14,537,684</td>
<td>$12,070,119</td>
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**Other Units**

<table>
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<th>Program</th>
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<th>7/02 - 9/04</th>
<th>7/01 - 9/03</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Support Programs</td>
<td>$1,751,156</td>
<td>$1,564,705</td>
<td>$2,476,648</td>
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<tr>
<td>Graduate School</td>
<td>$510,041</td>
<td>$713,093</td>
<td>$731,047</td>
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<td>Outreach</td>
<td>$1,671,002</td>
<td>$1,303,083</td>
<td>$722,492</td>
</tr>
<tr>
<td>Vice President for Research</td>
<td>$1,800,354</td>
<td>$3,509,715</td>
<td>$3,820,210</td>
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</tbody>
</table>

**Total Average**

| Average | $169,966,177 | $156,263,429 | $145,385,064 |

Given year reflect the average of the current and the two preceding years). This report, available to all users, is shown in Figure 18.

**Enterprise Metrics: Trend Analysis.** Most of the reports examined so far have conveyed various types of highly concrete information, i.e., size of awards, number of awards, and status of awards by PI. However there is also value to be gained in looking at the general character of awards.

Figure 19 compares the percentage of Penn State faculty receiving increasing award amounts for seven colleges (note that this is not automatically generated but is the result of the manual synthesis of human resources and award data). The bins are cumulative, which presents an effect similar to percentiles. By using percentages one can “normalize” the curves, which makes college-to-college comparisons easier (the significant variation in college-to-college total awards is concealed). Also note that the
figure doesn’t use consistent bin sizes; instead they are smaller on the lower end of the scale (in effect magnifying that portion of the curve) and larger on the higher end. This may render the resulting information not statistically valid but will nonetheless satisfy a need for general information.

It’s interesting that the funding profiles for this relatively broad cross section of colleges are pretty consistent, although differences do exist. On the low end, there seem to be two clusters of colleges: those colleges with 5-to-12 percent of the faculty receiving no awards and those with 20-to-25 percent receiving no awards. Then there is College A, whose curve bows out between the $100,000 and $500,000 levels. Most likely the answers to why these differences exist are more qualitative than quantitative and do not diminish the report’s general usefulness.

Usually one can directly access the metric that one is interested in (for example, time to award). However, sometimes one can only get access to the metric by measuring something related (for example, if one were trying to measure average number of departments contributing to proposals as a gauge of interdisciplinary collaboration). Such a related metric is called a “surrogate.”

Over the past decade or so, many institutions have striven to encourage multidisciplinary research. Figure 20 shows one coarse surrogate (percentage of awards with multiple investigators) for estimating an institution’s transition to multidisciplinary research. At around 1999 there is a change in the slope of the three curves — the percentage of awards with multiple investigators began to increase. This
does not *conclusively* prove that more multidisciplinary work is being awarded but, in light of the knowledge that federal sponsors and the university were encouraging multidisciplinary activity, it provides an *indication* that more multidisciplinary work is being awarded.

**705.7 Risk Areas and Critical Success Factors in Implementing Information Systems**

The success of any software application is a function of one primary metric: number of people using it. In other words, if no one uses it, the software application has, by definition, failed. Of course once people start using the software, other factors come into play that influence the “success” or “failure” of the system. Traditional return-on-investment metrics is one such factor in determining the success or failure of software. However, adoption by users is the *sine qua non*; if people won’t or can’t use the software, it is essentially useless. The reality of the IT business (and of many other businesses as well) is that people only use products that they *perceive* as valuable.

It is incumbent, therefore, on any proponent of new software to articulate clearly the value of the software for the individual user as well as for the institution. Once promises are made, however, one must deliver on these promises and meet — or exceed — the expectations of users and customers. And there’s the rub. To design valuable software, developers must ensure that it meet the needs of the target audience. To do so, developers must understand the needs of the customer base before they begin designing. This requires that developers (and business analysts if appropriate) meet with target users and engage in an often extended dialog. Likewise, if an OSP is purchasing or outsourcing an information system, it must be sure that everyone charged with making the system selection fully understands users’ *actual* and *perceived* needs.
Financial Considerations

It is a very common error to consider only start-up costs when deciding to implement a software application. This is a very serious error because in doing so, “life-cycle” costs are not accounted for upfront, and the necessary monies to maintain the system are not budgeted for. Over a very few years, if the necessary maintenance funds are not found, the system will be rendered progressively less useful and more vulnerable.

Life-cycle costs include application software maintenance (if the application is developed in-house this cost manifests itself in salaries of programming and database staff); operating system maintenance (including version upgrades and staff time); security and system redundancy; and hardware maintenance and replacement. These costs are significant.

Resistance to Change

It is often true that there will be (at times significant) opposition to the introduction of any new system or process. Indeed it is not uncommon for potential users to simultaneously hold two mutually exclusive fears: that the new system will both eliminate their job and introduce additional work. The only effective counterargument to this is to ensure that the information system adds value, not only to the OSP or institution at large, but also to the individual user. If users see that the system is adding value to their work, they will embrace it.

It is also extremely helpful if the OSP in which a system is being deployed has a change advocate to promote the system and its value. Unfortunately this is not the type of person one can requisition from the office of human resources; they’re either already on staff (if one is lucky) or not. If someone in the office is championing the system, he or she should be nurtured and supported.

Shadow Systems

A shadow system is a system, not always computerized, that is used by a unit (or units) to either replicate some functionality of an institution’s central systems or provide some functionality that a unit’s system is not providing that the user thinks is necessary. A shadow system is an “unofficial” system maintained by institutions or departments within the institution. If the shadow system is redundant it is, at best, a waste of resources and, at worst, a profound statement that existing systems are not to be trusted.

On the other hand, if the shadow system is providing a function that existing systems are not capable of providing or are not providing for some other reason, the existence of the shadow system should be used as a rationale for determining and making enhancements to the central system. (Of course the cost of an enhancement should always be weighed in light of the number of potential users who would benefit from the enhancement.)

Shadow systems do not so much present a risk as they indicate whether or not an information system is successful. One measure of success may be the spontaneous elimination of shadow systems.
Special Issues for Small Institutions

The volume of research conducted by the typical small institution may not be sufficient to justify a significant investment in systems (purchase and life cycle) or personnel. On the other hand, the lower volume — and resulting smaller amount of data associated with the research enterprise — could also mean that much valuable analysis could be accomplished without sophisticated (and specialized) IT systems.

Still every institution, despite its size, will want to determine information needs, understand processes, and analyze efficiency in order to manage the sponsored programs office and the research enterprise effectively. The average small institution will probably neither develop its own application nor purchase (and host) a software system. Given this reality, there are three basic options:

◆ The first option, and probably appropriate to only the smallest research portfolios, would be to track metrics in a simple spreadsheet. Today’s spreadsheets are remarkably capable and enable all sorts of manipulation and presentation options. (Note that spreadsheets were used to merge data from multiple sources and generate several of the reports from Penn State included in this chapter.)

◆ The second option is a step up in terms of capabilities. There are a variety of desktop databases that, if properly handled, can provide a nice user interface that permits users to easily access the data. In terms of hardware and software expenses, this option costs little more than the spreadsheet option. However, if this route is taken, the research administrator should seriously consider hiring a person (or at least have access to a significant portion of a person’s time) who is skilled in database design and programming.

◆ The third option for smaller research institutions is to contract with a third party to host (manage) the system and data — in other words, outsourcing. In general these application service providers (ASPs) also license the application software directly to larger institutions. This option offers three significant advantages: first, as the research portfolio grows, it can do so without overtaxing existing information systems infrastructure; second, it will provide access to (presumably) more sophisticated analytical tools; and third, no specialized IT staff will need to be hired.

The downside of this third option is significant but certainly manageable. That is, certain compromises may have to be made in terms of control over the data collected, available reports and how information is presented in them, and the system’s “look and feel.”
Conclusion

This chapter surveys the myriad issues that should be addressed when considering the OSP’s requirements for an information system. The use of commonplace terms like “information systems” might lead one to infer that the field of information technology and database design is well-established and well-understood, and that cookbook approaches for implementation exist. Of course such an inference would be far from the truth. Not only are the technologies underlying information systems in continual (and sometimes rapid) flux, but the use of information systems in research administration is a relatively recent phenomenon that is likely to undergo enormous changes in the near term.

The bottom line is that there are no standard recipes for implementing an information system. This chapter outlines important broad considerations in crafting a system for an office of sponsored programs. A specific solution used at any university will be, to some extent, unique. But this is good news for those adventurous souls who enjoy a challenge and being creative — those who like to break new ground and help stabilize a very fluid environment.
720 Supplementary Material

This section includes expanded coverage of topics relating to electronic information systems. These materials are culled from a variety of authoritative sources. (For additional discussions on electronic research administration, see Chapter 900.)

720.1 Navigating the ERA Maze of Building, Buying, and Maintaining Computer Systems

Steve Shapiro, Computer Services Manager, Office of Research Services and Administration, University of Oregon

As computer systems become increasingly important tools used to store, transmit, and maintain administrative grant information, the total number of problems associated with their use is increasing as well.

The topic of electronic research administration (ERA) has become prevalent at conferences and seminars. As more institutions are looking at options to maintain this information, it becomes germane to address the underlying fundamental questions that individuals and organizations should address prior to making a decision concerning an ERA initiative. Given the high expense, often in the hundreds of thousands of dollars, of these systems, the impact of these decisions will be felt for years to come.

We are going to explore four decision trees that your organization can traverse in order to determine what approach might be best for your institution. As we dig deeper into the problem, we are also going to find that there is no ultimate correct answer, and the currently correct answer will probably change over time. Furthermore, the answers on one of the decision trees will depend on the answers on other trees. Changing any of the answers on one tree will impact the others.

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1 Steve Shapiro is an IT professional who has been employed in the Office of Research Services and Administration, University of Oregon for 11 years. During that time, he has both written and purchased electronic research administration systems and is an ongoing contributor and participant at NCURA conferences. This article is adapted from a presentation given at the NCURA annual meeting in November 2006. The author would like to acknowledge the help of Dave Dose, University of Oregon and Jon Peterson and Tyler Wilson, Colorado State University.
1st Decision Tree: Where Are We Now?

The root of the first decision tree asks the question where your mandate is coming from. For the purposes of this discussion, we are going to assume that you are a Sponsored Projects (or Research) Administrator or Officer working in a Sponsored Projects (or Research) Office at a grant-funded research organization.

◆ From “above”?
Concern with institutional performance and overall funding often drives activity at the Dean/Provost and President levels. Most often, these individuals will be concerned with increasing research funding. Along with increased funding comes increased administrative overhead.

◆ From SRO staff?
Typically, SRO staff are overworked and underpaid. However, if you find that your office is churning through staff, proposals are not being submitted on time, or awards are not being managed appropriately, this may indicate that your office has a problem that simply throwing an FTE at may not solve.

◆ From your PIs?
Are PIs proposals getting submitted and funded? Are they creating and submitting proposals in the quantity and of the quality that you expect? Are their technical and financial reports getting turned in on time?

◆ Do you have departmental grant administrators?
Do your departments have staff with access to the information they need to manage proposals and awards (assuming this is done at the departmental level)?
Once you understand the root of the tree, you can look at the upper structure and ask yourself questions such as:

1. What is our institutional culture?
   - Are we centralized/decentralized? What is our administrative organization process?
   - How are our researchers organized? Are we an undergraduate, graduate, or both level institution? Are we a teaching, research, or both type institution? What other institutions are similar to us?

2. What role do we play in the proposal/award process?
   - Are we pre-award, post-award, or both? Do we participate in proposal development? Does our office submit reports or remind the PI to submit them?

3. How are we handling things right now?
   - Are our current methodologies working? If not, what should we look at changing? If they are working, what can be enhanced by applying information technology?

2nd Decision Tree: Build or Buy?

<table>
<thead>
<tr>
<th>Build or Buy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Build</td>
</tr>
<tr>
<td>Both</td>
</tr>
<tr>
<td>Buy</td>
</tr>
</tbody>
</table>

- How am I handling it now?
- What’s my volume?
  - How many proposals, how many awards, what else?
- Start over or enhance existing?
  - Who should help me answer this question?

To answer the first questions of the second tree, you’ll dig deeper into the questions you asked yourself in the first tree:

1. How are we handling proposals, awards, and IT right now?
2. What is our volume, both in terms of number of proposals/awards and their dollar volume?
3. Should we enhance an existing system or start over?
Who should help you answer these questions?
(1) Current IT staff at your institution
(2) Other SRO professionals
(3) Person or persons who establish your office’s budget

Some pitfalls to pay attention to:
(1) Don’t assume you’ll save money by building your own system. Try to put together five- and 10-year estimates of expenses.
(2) Don’t assume the software you buy will be perfect, regardless of vendor promises.
(3) The answer will change over time.

3rd Decision Tree: What Kind of Support Is Needed?
Regardless of the system you build or buy, you will need end-user computer support for both your office staff and individuals across your institution who use the application. Bundled with that is the issue of training, both for your office and end users.

If your office computers are located on a local area network (LAN), or you connect to the Internet via a LAN, then you will also need support and security for your network. The support can come from any number of different sources:

◆ Homegrown: This is the person in your department who was hired for a non-IT-related function and has become the “go-to” person for IT assistance. This accountant, SPA, or other person has risen to the task, perhaps creating some spreadsheets or databases. He or she is the go-to person when the printer jams or your computer locks up.

    Advantage: Knows your business, your language, and you probably already have a good relationship with them.
Disadvantage: Probably does not have in-depth computer skills and multi-tasking will dilute their efforts.

◆ **Department IT Professional:** Position was created to assist, create, and/or maintain computers and computer applications for your department.

*Advantage:* Depending on the skill set the person had when hired, they may have abilities to do things with the computers you did not know were possible. He or she will offer new thoughts and perspective on solving your ERA problems.

*Disadvantage:* Will have to learn your language and your business as they go through a breaking in period.

*Wildcard:* The person you interview may become a different person after they start working.

*On the side:* He or she may want to take an occasional day off, or holiday, vacation, or sick leave. They require care and feeding, including possibly the ability to take advantage of educational opportunities!

◆ **External IT Professional:** A person contracted to your office to assist with hardware installation and maintenance and to design and maintain software. The person may be from within your institution, the vendor of your product, or an independent contractor.

*Advantage:* You only pay for what you need, and you usually get a high level of technical expertise. If internal to your institution, you may be able to use “funny money” to retain this person.

*Disadvantage:* The person may lack commitment to your unit and disappear with little or no notice. Also, he or she may not understand your culture or needs.

*Note:* An external person is a little bit more expensive than an internal person after fringe benefits are taken into account.

Questions to ask yourself when considering adding IT support to your organization:

◆ What do we need done?

◆ Are we looking for network management, application development, or both? These functions require very different IT skills, similar to someone majoring in one subject with a minor in another. Double majors (or people highly skilled in both areas) are rare.

◆ Evaluate the communication skills of the people you are considering. Can you understand them? Can they understand you?
Depending on the scope of the project and the type of information to be managed, data storage and application service can take place on something as simple as a networked — end-user — workstation that shares folders with other workstations on the network (and the Web), department-based servers (LAN, Web, E-mail), central organizational servers, or servers located at the vendor location and accessed via the Web.

In order to determine the appropriate platform for your application, you should first determine how it will be accessed. Are your users sitting right next to you? Are they located across campus or across the world? Will they want paper output and reports? Is security an issue?

Who is going to be responsible for the integrity of the data? Data integrity is a very broad reaching term that encompasses the following:

- Data validation at input
- Connecting the user to the data they are entitled to view
- Securing the data against unauthorized access
- Backing up the data
- Ensuring the backup contains usable data

Put simply, data integrity is the assurance that data is consistent, correct, and available when needed.
Each of these available platforms has advantages and disadvantages:

◆ **Local Workstations**

  *Advantages:* Very low cost ($$$), direct access to data.

  *Disadvantages:* Limited simultaneous access, multi-user applications will be limited to two-three simultaneous users, and one or two Web users. There is a high probability of the workstation crashing or shutting down.

◆ **Department-Based Server**

  *Advantages:* Relatively low cost (low $$, $$$), direct access to data, Web access to data is possible with fewer than 100 simultaneous users.

  *Disadvantages:* IT personnel to manage the server are highly recommended.

◆ **Computing Center-Based Servers**

  *Advantages:* High volume, high reliability.

  *Disadvantages:* High cost ($$$, $$$$), IT personnel to manage the server are mandatory, lack of access to raw data, new level of administrative overhead, difficult to modify.

◆ **Vendor-Based Servers**

  If you are purchasing a system from a vendor, there is a high probability that you will be offered hosting services as part of the package. All traffic for your application will be directed to the vendors’ data center, transparent to your office staff and end users.

  *Advantages:* High volume, usually high reliability, no technical assistance needed at your location.

  *Disadvantages:* Very high cost ($$$, $$ $$ $$), but often bundled as part of the system price. Lack of access to raw data, new level of administrative overhead, difficult to modify, lack of control over data may present institutional issues. What happens to application and data if vendor goes out of business?

**So … Is It Build, Buy, or Both?**

Ultimately, there is no right answer to the build or buy question, and the situation is constantly changing. You are in reaction mode in that sponsors dictate how you will send applications to them. While they do have a mandate to give you money in order to do research, you still have to apply for and manage the money subject to their terms and conditions.

Whether you build or buy, there is going to be a notable financial commitment. If you build there is a low initial investment cost, but you will have continuous expense related to the maintenance and upkeep of the application and the developer. Loss of the developer can be catastrophic to the application. Are you patient and prepared to make mistakes? Are you able to function if the application is unavailable? Do you have a long-term vision of where you are going and the resources that will be required to get there?

continued
If you buy, the application will require a *gap analysis* in order to determine the differences between what your requirements are and what the application does. Other questions that are wise to ask yourself are:

(1) Will we have to modify our current methods of doing business to accommodate the software, or can the software be modified to our way of business. What percentage of our current problems will the system solve?

(2) Are institutions that have similar culture to ours using the system with a moderate degree of success? Can you do a site visit to evaluate how they are using the system on a day-to-day basis? What features of the system do they use, which are ignored?

(3) Try not to rely on querying members of a listserv for their opinions. The context and culture of the member institutions who reply may be completely different from your own.

(4) What are your expectations that this vendor will be around for the next 10 years?

If you are considering a build/buy solution, it may be advantageous to purchase a system that gives you access to the data and source code, then modify it for your institution. While it is not likely that a private vendor would consider this option, other institutions may.

You may also consider merging institutionally developed systems with vendor solutions. If their data resides on the same platform, a skilled IT professional should be able to enable the systems to communicate and transfer information internally.

Regardless of which solution you decide to go with at any one point in time, gathering support from your administration and end users early on can be critical to your success. Ask them for input as to what the system should do, and the features they would find the most useful. Emphasize how your proposed solution encompasses their needs, and keep them in the loop concerning your successes and failures as you begin the implementation process. Consider including them in demonstrations and beta testing. Emphasize the benefits that they can look forward to, and the difficulties they might encounter as changes start to happen and the system begins to take form.

The most important thing to remember is that we are in a dynamic systems environment. The answer that we arrive at today will have to be constantly re-evaluated over time.
720.2  Developing an Institution-wide Web-based Research Request and Preliminary Budget Development System
Julia L. Glenn and Royce R. Sampson, Medical University of South Carolina

Abstract
While medical research may often be regarded by academics and the general population in terms of the remarkable science being conducted or the study participants willing to volunteer their time for the advancement of medical innovation, many in the research administration field recognize the tremendous amount of effort that goes on behind the scenes (Shambrook & Roberts, 2011). Accurate budgeting and compliant billing are two of the critical pieces of an evolving research administration puzzle. These activities are vital to the overall success of any research project and to the integrity of the research institution. In today’s technology-driven world wherein the term “process improvement” is widespread in academic research, electronic tools to reduce burden and increase efficiency have become a common goal at many research institutions.

Along these very lines, the South Carolina Clinical and Translational Research Institute at the Medical University of South Carolina (MUSC), the “academic home” of the National Institutes of Health Clinical and Translational Science Award (UL1RR029882), partnered with the institution’s Office of the Associate Provost for Research to develop a streamlined, centralized infrastructure for accurate research budgeting and compliant billing. The purpose of this paper is to describe the conceptual model of an institution-wide secure, web-based research service request and preliminary budget development tool currently under development at the Medical University of South Carolina.

Background and Introduction
The Medical University of South Carolina (MUSC) was founded in 1824 and today remains the only comprehensive academic health sciences center in the state of South Carolina. The institution strives not only to provide an outstanding educational atmosphere for its students and deliver patient care of the highest quality, but also seeks to be an international leader in the development of new medical knowledge and cutting-edge innovation. To that end, MUSC has a robust portfolio of basic, clinical, and translational research. In FY2010, the institution was awarded more than 1,200 research awards totaling over $234 million and representing over 500 investigators and countless research staff (Office of Research and Sponsored Programs, 2010).

In recent years, MUSC administration and leadership have continuously emphasized the importance of using available technological advances to create streamlined...
and effective systems for the management, review, and administration of the institution’s abundant research. In the last decade, MUSC has implemented electronic tools for the submission and review of Institutional Review Board and Institutional Biosafety Committee applications, grant proposals to the Office of Research and Sponsored Programs, as well as the submission of applications to Grants.gov utilizing a system-to-system interface (Medical University of South Carolina, 2006).

While such processes have undergone a technology overhaul, the critical processes of budget development and review as well as compliant research billing have remained static and have been deemed challenging by many research faculty, staff, and administrators. These processes rely almost exclusively on manual paper transactions and constant, repetitive email and face-to-face communications between various contributors to the study, such as the investigator, study coordinators, service providers, and billing specialists.

Research study team members must begin to construct their preliminary research budgets by contacting individual service providers separately to obtain pricing for research procedures. For example, price quotes for a myriad of laboratory tests are requested from the individual laboratories performing the tests; quotes for radiological procedures must come from the university’s Imaging Center or the Department of Radiology; estimated costs for an entire menu of investigational pharmacological services originate from Investigational Drug Services; quotes for specific research nursing services might be secured from the Clinical and Translational Research Center; and so on. Quotes may be obtained via email, paper applications, or phone calls, depending on the individual service provider. In addition, providers of research-related services often operate in silos. They provide pricing for their specific services, when in fact protocol procedures are often interrelated. A radiological scan, for example, may require contrast media, the cost for which must be obtained from a different source than the scan itself. The current system requires that the individual requesting research services is (1) aware of this complicating detail, and (2) obtaining the fee for the scan from the Department of Radiology and the technical (or facility) fee for the administration of the contrast from the Hospital Compliance Billing Office.

Once study teams obtain an “accurate” budget through this current method, the equally complicated coverage analysis process begins. This process also relies heavily on constant communication between research study team members and very specific (and sparse) service providers with valuable but individualized knowledge. Research staff must construct a billing grid complete with every research-related service that may incur a cost and subsequently be billed. The billing grid must indicate whether each identified service will be billed to the study sponsor, is a routine care procedure to be billed to a third party payer (such as the research subject’s insurance carrier), or is to be covered by study personnel’s effort.

Often these grids must be built from scratch. Sponsors of investigator-initiated protocols frequently do not provide a general template complete with all billable study procedures. However, while sponsors of industry-initiated/industry-sponsored protocols often supply such templates, they are extremely different from the
way the institution actually bills for services (for example, the common line item of "chemistry" may be comprised of a variety of different billable services). In either case, the study team must generate an original grid.

Once the billing grid is complete, a Medicare Coverage Analysis (MCA—a thorough review required for all clinical research studies to ensure that any tests, procedures, and/or interventions performed on study participants and being billed to any third party remain in compliance with legal mandates) must be requested from the University Compliance Office to ensure compliant billing throughout the subsequent study. This review entails manually entering information from the billing grid into a large Excel database so that historical decisions regarding coverage can be accessible at a later date. Coverage decisions are communicated to the study team via email and/or phone. Billing grids and budgets are manually updated as a result of the billing review as needed.

Figure 1. Overview of Research Budgeting and Billing Compliance Review Process at MUSC

This current labor-intensive system of research budgeting and billing compliance review is time-consuming, outdated, and prone to human error. As such, and with a large and growing portfolio of medical research, the South Carolina Clinical and Translational Research Institute (SCTR) and the Office of the Associate Provost for Research sought to develop an electronic system that would accomplish three critical tasks: 1) streamline and centralize the process of requesting research-related services across campus; 2) assist in the timely creation of an accurate preliminary budget and billing grid to ensure research billing compliance for individual research studies; and 3) allow MUSC to be competitive with academic medical centers of similar stature (Stanford University, 2010; Whitney & Wolff, 2011) with regard to electronic research administration and clinical trials management systems. What follows is a discussion of the conceptual model used to develop a comprehensive electronic system for research service requests and budget development at MUSC.
Methods

Groundwork for the proposed model first began by identifying major stakeholders in the research budgeting and billing process at the MUSC. Key participants, in addition to SCTR and the Office of the Associate Provost for Research, were initially identified as: the Department of Radiology, the Investigational Drug Pharmacy (IDS), University Medical Associates (UMA) and Medical University Hospital Authority (MUHA) Compliance Billing Offices, the MUHA Clinical Chemistry Laboratory (MUHA Lab), and the Department of Medicine.

These stakeholders were approached with the basic concept of a centralized electronic research request and preliminary budgeting infrastructure and asked to lend support to the project by endorsing the pilot-testing of the proposed system for day-to-day research service requests and approvals. Early meetings with the stakeholders centered on functionality of the proposed system and changes to current workflow. After their endorsement, key project personnel were identified (see Table 1).

<table>
<thead>
<tr>
<th>Project Title</th>
<th>Project Personnel &amp; Affiliations</th>
<th>Project Role</th>
</tr>
</thead>
</table>
| Project Owner         | Royce Sampson, MSN, RN, CRA SCTR SUCCESS Center                       | • Overall concept development  
                           |                                                        | • Map out system functionality  
                           |                                                        | • Strategic planning for phased system rollout  
                           |                                                        | • Review and approve all system content and design  
                           |                                                        | • Obtain project funding and SCTR Leadership approval |
| “Project Leader (2)”  | Lane Glenn, BS, MRA SCTR SUCCESS Center  
                           | Amanda Zimmerman, BA SCTR SUCCESS Center                                           | • Assist Project Owner with overall concept development  
                           |                                                        | • Assist Project Owner with outlining system functionality  
                           |                                                        | • Develop system content and design (user interface and administrative portal) for Project Owner approval  
                           |                                                        | • Work with stakeholders to identify system need and requirements  
                           |                                                        | • Collaborated with SCTR Office of Biomedical Informatics during system development on problems encounter to offer solutions and additional system options |
| Lead Developer        | Mark Gunnels, BA SCTR Office of Biomedical Informatics                | • Analyzes the Project Owner’s/Leaders’ scope of work regarding system functionality and design and creates appropriate system programming solutions  
                           |                                                        | • Responsible for the overall architectural design of the system from a programming and software perspective |
| Infrastructure Lead   | John Clark SCTR Office of Biomedical Informatics                      | • Responsible for the implementation of the system from a hardware and networking perspective |
| Lead Collaborator     | Loretta Lynch-Reichert, MS Office of the Associate Provost for Research | • Works with key institutional stakeholders to achieve buy-in on and support for the proposed system |
| Project Manager       | Maynard Cain, BS, MBA, PMP SCTR Office of Biomedical Informatics      | • Maps out SCTR biomedical informatics staff tasks and timelines in accordance with Project Owner’s/leaders’ plan to ensure timely completion of the project |
| Project Programmer (4)| Andrew Cates (Lead), BS SCTR Office of Biomedical Informatics  
                           | Jed Schneider, BS, MA SCTR Office of Biomedical Informatics  
                           | Gary Fredericks, BS, MBA SCTR Office of Biomedical Informatics  
                           | Matthew Scott, BA SCTR Office of Biomedical Informatics | • Manages biomedical informatics development process  
                           |                                                        | • Implements actual system content and design from a programming perspective  
                           |                                                        | • Responsible for performing daily/weekly development tasks in support of system release  
                           |                                                        | • Provides general system maintenance |
These personnel set three goals at the outset of the conceptual model development. With the help and expertise of identified stakeholders, SCTR research specialists, SCTR biomedical informatics programmers and analysts, and departmental research administration professionals who can offer proficient pilot-testing and recommendations, project personnel sought to

- develop a dynamic and intuitive user interface prototype wherein faculty and staff can request research services from multiple service providers simultaneously and concurrently develop associated research service-related budgets and billing grids with ease;
- develop a streamlined administrative portal model wherein service providers can electronically manage, review, and approve requests for research services and prices as well as provide a thorough billing compliance review; and
- keep all identified stakeholders engaged and informed throughout development to encourage their ongoing recommendations and continued support for the project.

Results

Goal 1. Develop a User Interface Prototype

Project personnel identified three basic objectives for the original user interface model: (a) allow users to request research services and associated pricing from various service providers simultaneously via an electronic system; (b) allow users to construct a preliminary billing grid and subsequent draft research budget using the requested research services and prices electronically; and (c) allow users to electronically indicate how requested research services will be billed/funded for billing compliance review.

To achieve the first objective, project personnel, in collaboration with the service providers whose research services would ultimately be displayed in the system, developed the service catalog interface displayed in Figure 2.
Using online shopping as a model, project personnel created a prototype where users can easily search for research services under logical groupings. Much like shoppers can search for genres of books at online bookstores, users can search for groupings of various services, such as Laboratory, Radiology, Investigational Drug, etc., or perform a simple search for one particular service. Users can browse services under any of the listed service providers. As users find the service they are looking for, they simply click “ADD” to include the service in “My Services,” which is analogous with an online shopping cart. Rather than requesting services from each service provider separately, users can now select services from multiple providers concurrently.

The system allows each request to be associated with one research project. Users may associate the newly submitted service request to a project that already exists in the system or enter a new project (Figure 3) by providing some basic project information such as title, involvement of human subjects and/or research animals, and funding source, as well as authorize project personnel for system access and specific rights. Next, users are asked to provide the estimated total number of subjects and estimated total number of visits to begin constructing their preliminary budget (Figure 4).
With this initial information, the system generates an electronic billing grid template. To achieve their second and third objectives, project personnel created a billing grid with multifunctional views—allowing users to accomplish two tasks: 1) generate an initial budget based on the research services requested, the quantity of selected services at each visit, and the current fees from each of the appropriate service providers, and 2) indicate how each requested service will be billed throughout the course of the study for a thorough billing compliance review. As illustrated in Figure 5, users first enter the number of times per visit that each service is to be completed (1st grid), followed by the funding source (2nd grid). A preliminary research budget (3rd grid) is then produced. Fees that are to be billed to a third party or are to be covered by study personnel’s effort are not included in this original budget.

Figure 3. New Research Project Prototype
Figure 4. Preliminary Budget Information Prototype

Next, please enter the following information specific to your research project. This information will help us generate applicable service fees for your review.

<table>
<thead>
<tr>
<th>Estimated Total Number of Subjects</th>
<th>Estimated Total Number of Visits</th>
<th>Estimated Study Start Date</th>
<th>Estimated Study End Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>5</td>
<td>1/31/11</td>
<td>5/31/11</td>
</tr>
</tbody>
</table>

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Figure 5. Preliminary Billing Grid/Research Budget Prototype

Please indicate how many times each service is performed per visit by clicking the arrows up and down.

<table>
<thead>
<tr>
<th>Services</th>
<th>Program</th>
<th>Core</th>
<th># of Subjects</th>
<th>Number per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>University Lab Services</td>
<td>MUHA CC</td>
<td>N/A</td>
<td>10</td>
<td>Visit 1: 3, Visit 2: 1, Visit 3: 1, Visit 4: 1, Visit 5: 1</td>
</tr>
<tr>
<td>Technical Services</td>
<td>Rheumatology</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
<tr>
<td>Professional Services</td>
<td>Rheumatology</td>
<td>N/A</td>
<td>10</td>
<td>1</td>
</tr>
</tbody>
</table>

Next, please indicate whether each service is to be billed to a third party (e.g., patient’s insurance), to the research study, or is to be covered by % effort. Type “T” for third party, “R” for research study, or “%” for % effort. “Click calculate Service Fees to Continue.”

<table>
<thead>
<tr>
<th>Services</th>
<th>Program</th>
<th>Core</th>
<th># of Subjects</th>
<th>Number per Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Services</td>
<td>Rheumatology</td>
<td>N/A</td>
<td>10</td>
<td>R</td>
</tr>
<tr>
<td>Professional Services</td>
<td>Rheumatology</td>
<td>N/A</td>
<td>10</td>
<td>%</td>
</tr>
</tbody>
</table>

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Goal 2. Develop an Administrative Portal Prototype

A robust and intuitive administrative portal is as important as the user interface to ensure success of the system as well as stakeholder buy-in. The administrative portal allows system administrators to manage, review, and approve users’ service requests within a centralized electronic portal. Project personnel identified three key objectives for the proposed administrative prototype: a) allow administrators to receive service requests electronically and quickly view all service requests for their program by status; b) allow administrators to review services of individual requests for approval and tracking purposes; and c) allow administrators to view services requested from other programs to help identify additional required services (for example, contrast media for a particular radiological exam) as needed.

To achieve the first objective a familiar, email-type interface was adopted, wherein administrators can view all service requests for their program sorted by status (Figure 6).

Figure 6. Administrative Portal “Inbox”

Similar to any modern email client, administrators have an “Inbox” (“Submitted Requests”) where newly submitted requests that need to be addressed reside until the Administrator changes the status from “Submitted” to “In Process.” Once logged in, the administrative portal automatically defaults to this “Inbox” view. The folders indicating status (“Submitted,” “In Process,” “Completed”) denote the phase of service request review. Administrators can quickly move back and forth between each status to gauge workflow and any outstanding issues at a glance. Administrators can likewise place requests “On Hold” (for example, if the sponsor of a study has put the study on clinical hold for further FDA review), which removes the request from the standard service request status folders and places it in the “On Hold” folder until manually changed by the administrator. Administrators can likewise send requests out for additional “PI Review” prior to approval (if the contents of the request have changed dramatically from initial submission, for example).

Changing a request to “PI Review” status generates an automatic email from the system to the principal investigator summarizing request changes that require
his/her approval. Similarly, when any request has been reviewed and approved (described below), the system places the request in the “Completed” tab. This folder (status) view provides a global, multiple-project perspective that facilitates efficient administrative management of the service requests for the program. Within each folder, each request also includes an abbreviated view of pertinent request information: the names of the principal investigator and requester as well as an overview of services being requested (available in a drop-down menu). Additional features of the administrative portal include the ability to assign any request to a particular staff member for management, review, and approval and to access individual service request details by clicking on the hyperlinked Service Request Identification Number, SRID.

Administrators have a variety of tools available to them in the Service Request Details module (Figure 7).
To accomplish the second and third objectives for the Administrative Portal, project personnel designed a multipurpose Service Request Details module wherein administrators can view both in-depth details about the protocol itself (funding source, sponsor, IRB and IACUC numbers, etc.) as well as the individual services being requested. Within this module, administrators can review, edit, and/or complete data required for service request processing, tracking, and reporting. Examples include ensuring that users have requested the correct services, entered the correct quantity, and received the appropriate service pricing (the system accommodates multiple-tiered pricing dependent upon funding source).

Administrators can add and/or delete services to the request as indicated through review of project and/or after discussing the request with the requester and investigator. Since many institutional service providers have policies that require requesters to be contacted within 24 hours of the initial request, the system also tracks the date and time of status change for comparison with established program metrics for evaluation and reporting as well as for continued process improvement activities.

In addition, administrators not only have access to any pertinent documents users may have attached to the initial request under the “Uploads” tab but can also upload applicable documents related to the service request to facilitate the proposal pricing process, document work fulfillment, or share pertinent information directly with the investigative team (Figure 8). Often, review of a protocol and consent by the service provider helps to ensure that all necessary services have been requested and pricing is accurate. Likewise, this ability for users and administrators to share documents can facilitate effective service consults as needed in areas such as regulatory, ethics, and biostatistics. All service request documents are accessible to the requester, the Principal Investigator, and any other users given access. This feature allows service providers and users to “communicate” as needed through a versioned/auditble document repository.
Lastly, to view those services requested from other programs for any individual service request, administrators simply click on the “Related Service Requests” tab within the module (Figure 9). Like their Administrator Inbox, administrators have access to an abbreviated view of all other service providers involved in the protocol as well as individual services requested from each provider. This functionality ensures that service providers do not operate in silos but are able to provide integrated, collaborative, and comprehensive services in order to better promote the success and compliance of investigators’ requests.

Figure 8. Administrative Portal—Document Repository Prototype

Figure 9. Administrative Portal—Associated Service Requests Prototype
Goal 3. Engaging and Informing Stakeholders

Due to the trans-institutional nature of this project, as well as multiple and diverse service providers and potential system users, project personnel recognized the critical importance of keeping all stakeholders engaged, involved, and informed throughout conceptual model development. Encouraging input, suggestions, and pilot testing from stakeholders would be the key to the overall success and eventual institutional adoption of the model. To succeed, this system could not simply be the sole innovation of SCTR.

To achieve this crucial goal, project personnel employed a variety of methods, including bi-monthly meetings with all identified service providers. With all providers convened together in an open forum, suggestions for and concerns with the proposed system were elicited and encouraged. Because providers had a long history of operating separately, this joint meeting proved extremely beneficial. Providers were able to discern how others operated and discuss centralized workflow through the new system. Project personnel were able to identify additional features that may allow the system to function even more efficiently. Project personnel also arranged separate meetings with individual service providers to ensure that no one provider perceived any major difficulties or issues with the system, as well as to encourage providers to voice ideas on how to enhance the system using their individualized knowledge.

To keep potential system users engaged and informed during conceptual model development, project personnel also participated in a number of bi-monthly campus outreach meetings (departmental meetings, clinical trials billing meetings, Lunch ‘n’ Learn presentations). During each meeting, project personnel gave a brief overview of the proposed system (functionality, use cases, proposed workflow) as well as an update on the conceptual model development and future implementation. User feedback, small user workgroup participation, and user pilot testers were solicited during each meeting.

To garner support from institutional leadership and administration, project personnel provided a number of brief presentations on the proposed system at the College of Medicine Dean’s Council meeting as well as various Departmental Administrators meetings. All presentations were received enthusiastically.

The success of these assorted techniques to keep stakeholders engaged and informed has been evaluated by several metrics. The number of service providers wishing to partake in the system has grown from the original six to more than 10, and the list continues to grow with the recent addition of numerous institutional Cores and Facilities. Project personnel have identified no fewer than 15 departments and divisions across campus requesting to utilize the system for requesting and budgeting for services, ranging from Transplant Surgery, to Pediatric Cardiology, to Radiology.

Conclusion and Next Steps

These results, which demonstrate the successful development of comprehensive prototypes that delineate a practical and efficient means of electronically managing, reviewing, and administering a variety of vital pre-award activities, while ensuring
the continued interest and participation of current stakeholders and encouraging future participants, have clear implications for the proposed system.

Due to such sizeable interest in the proposal from not only the individual providers of research-related services but also from the research administration community at large, development of the system has begun in earnest. The SCTR Biomedical Informatics Program has dedicated five full-time programmers and analysts to the project in hopes of releasing the first iteration of the system in late Fall 2011. In preparation for this release, project leaders and project managers continue to publicize the conceptual model of the system across campus—to individual departments and divisions, research administrators, and top institutional leaders—in order to garner further support and solicit additional feedback for future upgrades and enhancements. In addition, project personnel have begun to draft a training and education plan to coincide with the release. System training will focus on both broad institutional education (Tegrity sessions available to all users, SCTR Lunch ‘n’ Learn presentations, new faculty orientation, etc.) and individualized/one-on-one training sessions as requested.

Proposals for future system enhancements and upgrades already abound. Planning and designing activities have already begun to incorporate the first of many such system augmentations. After the release of the initial system this fall, SCTR and its collaborators will begin to develop a robust user dashboard (a prototype of which is displayed below) that will display an overview of pertinent study and investigator information, such as a list of all protocols and service requests within the system, a catalog of related grants and publications, system notifications, etc.

![Figure 10. User Dashboard](image-url)
In addition, SCTR will begin to develop a strong study tracking and work fulfillment infrastructure that ties directly into the request and budget development system. This study tracking system (a small pilot of which has already been released for early feedback) is multifunctional and will enable study team members to track work performed on a discrete study (at the individual study participant and visit level) for sponsor invoicing purposes and service providers to track work performed within their individual service centers for PI billing.

Other proposed upgrades that will be explored include: an electronic subject enrollment log and visit scheduling calendar, a consent tracking and versioning system, and electronic source documentation abilities.

Acknowledgments
The authors thank Amanda Zimmerman for her wonderful graphic design and the SCTR Office of Biomedical Informatics System for its tremendous development abilities, without which this project would have been nearly impossible. Furthermore, the authors wish to thank the continued support and superb ideas of Loretta Lynch-Reichert, Stephen Skelton, Stephanie Gentilin, Randal Davis, Rebecca Barry, Reece Smith, Susan Rittman, Romeka Washington, Kimberly Porter, Dixie McNamara, Faleshia Davis, and Patti Lofmark.

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Literature Cited


About the Authors

Julia Lane Glenn recently received her master’s in research administration from the Medical University of South Carolina (MUSC). The resource described within this paper was the culmination of her master’s project, in which she focused on identifying a research administration need at MUSC and developed a means of addressing that need. At MUSC, she holds the position of Research Navigator within the SUCCESS Research Support Center of the South Carolina Clinical and Translational Research Institute (SCTR), the academic home for the National Institutes of Health (NIH), Clinical and Translational Science Award (CTSA) U54 grant mechanism for research infrastructure and training support. In this role, Ms. Glenn assists in providing investigators and research staff research support services spanning the entire research spectrum from inception of ideas through technology transfer and dissemination of best practice models. Ms. Sampson served as her mentor on the aforementioned project.

Royce Sampson is a Research Assistant Professor in the Department of Psychiatry and Behavioral Sciences, Medical University of South Carolina. She holds positions as the Chief Operations Officer, SUCCESS Center Director, and the Finance and Administration Director for the South Carolina Clinical and Translational Research Institute (SCTR). The SUCCESS Center, a research support service center, serves as the “front door” to SCTR programs and services and provides expert guidance, training, and support to researchers and their study team members related to regulatory affairs, recruitment and retention, budget development and grants management, and research conduct. Ms. Sampson has extensive research experience and has served in a variety of research management and grant administrator roles. She served as the Associate Director for Geriatric Psychiatry and the Alzheimer’s Research and Clinical Programs. She also served as the Regulatory and Quality Assurance Director and Node Coordinator for the NIH, National Institute on Drug Abuse, Clinical Trials Network, Southern Consortium Node. Prior to the CTSA grant, Ms. Sampson served as the Co-Administrative Director, Administration and Finance, for the NIH, NCRR, General Clinical Research Center and the Business and Grants Manager for the Department of Psychiatry, Clinical Neuroscience Division, which conducts research in addictions and co-morbidity under the direction of Dr. Kathleen T. Brady.
**Practical Tools**

This section includes practical tools — checklists, flowcharts, etc. — on topics relating to information systems of relevance to sponsored research administration. These materials are culled from a variety of authoritative sources.

### Checklist for Preparing an Information Security Plan

AIS editors

“Pervasive and sustained computer-based (cyber) attacks against ... infrastructures pose a potentially devastating impact to systems and operations and the critical infrastructures that they support,” according to the General Accountability Office.¹ A research administrator must be concerned about ensuring the integrity of your critical information systems and preventing them from being used or accessed by individuals without authorization. Bad things sometimes do happen, so it is important to remember that an information system should include not only systems to minimize the likelihood of attack (“security”) but also systems and procedures to mitigate the impact of system failures when they do occur and guide your response (“recovery”). This discussion focuses on how to develop a policy to protect your data and systems from attacks by individuals bent on wrongdoing and should be read in conjunction with ¶705.4 and ¶705.5.

**Identifying the Threat**

Threats to critical information systems and infrastructures are sometimes discussed in the following broad groupings²: Unintentional threats sometimes arise from software upgrades or maintenance procedures that inadvertently disrupt systems. Intentional threats include both targeted and nontargeted attacks. A targeted attack is when a group or individual specifically attacks a critical infrastructure system. A nontargeted attack occurs when the intended target of the attack is uncertain, such as when a virus, worm, etc. is released on the Internet with no specific target.

Specific types of threats categorized by US-CERT (the federal information security incident center) include the following:

- **Unauthorized access**: An individual gains logical or physical access without permission to a federal agency’s network, system, application, data, or other resource.
- **Denial of service**: An attack that successfully prevents or impairs the normal authorized functionality of networks, systems, or applications by exhausting resources.
- **Malicious code**: Successful installation of malicious software (e.g., virus, worm,

Trojan horse, or other code-based malicious entity) that infects an operating system or application.

◆ **Improper usage**: A person violates acceptable information or infrastructure use policies.

◆ **Scans/probes/attempted access**: Any activity that seeks to access or identify a federal agency computer, open ports, protocols, service, or any combination of these for later exploit.

According to GAO, a system’s vulnerabilities “become particularly significant when considering the ease of obtaining and using hacking tools, the steady advances in the sophistication and effectiveness of attack technology, and the emergence of new and more destructive attacks.” Therefore, protecting “computer systems and the systems that support critical infrastructures has never been more important” (see Figure 730.1-1).

**Figure 730.1-1: Cyber Attacks Are on the Increase**

Incidents Reported to US-CERT in FYs 2005-2007

![Bar chart showing types and number of incidents reported to US-CERT in FY 2005, 2006, and 2007]

Types of Incidents Reported to US-CERT in FY 2007

![Pie chart showing the distribution of incident types in FY 2007]

**Note**: US-CERT is the federal information security incident center at www.us-cert.gov.

Who is threat to information infrastructure? The following types of individuals are often identified as posing a possible threat to information security systems³:

◆ **Hackers**: Hackers sometimes crack into networks for the thrill of the challenge or for bragging rights in the hacker community. While remote cracking once required a fair amount of skill or computer knowledge, hackers can now download attack scripts and protocols from the Internet and launch them against victim sites. Thus, attack tools have become more sophisticated and easier to use.

◆ **Hacktivists**: Hacktivism refers to politically motivated attacks on publicly accessible Web pages or e-mail servers. These groups and individuals overload e-mail servers and hack into Web sites to send a political message.

◆ **Disgruntled insiders**: The disgruntled insider, working from within an organization, is a principal source of computer crimes. Insiders may not need a great deal of knowledge about computer intrusions because their knowledge of a victim’s system often allows them to gain unrestricted access to cause damage to the system or to steal data. The insider threat also includes contractor personnel.

◆ **Criminal groups**: There is an increased use of cyber intrusions by criminal groups that attack systems for monetary gain.

### Developing a Security Policy

Obviously, you cannot afford the loss of critical (or sensitive) information or the risk of propriety information getting into the wrong hands or the downtime that could result from a breach in your security, therefore planning for prevention and response are important. Key elements of an information security program include⁴

◆ **Develop a comprehensive plan for critical infrastructure protection.** Include in the plan a strategy that clearly articulates objectives, goals, and priorities and identifies. Identify someone to manage the process and others on the team and what responsibilities each has. Identify plans for providing adequate information security for networks, facilities, and systems or groups of information systems, as appropriate.

◆ **Develop partnerships and coordinate with other offices/units within your institution; improve/enhance information sharing involving attacks, threats, and vulnerabilities.**

◆ **Develop and enhance analysis and warning capabilities.** Identify and implement protective programs. Identify a process for planning, implementing, evaluating, and documenting remedial action to address any deficiencies and that accommodates periodic testing and evaluation of the effectiveness of information security policies and practices. Perform testing with a frequency that correlates to risk, but no less than annually.

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³ See footnote 2.

⁴ These tips are based on material contained in the following General Accountability Office reports available at www.gao.gov: GAO-09-432T, GAO-08-571T, and GAO-08-64T.
◆ Provide and coordinate incident response and recovery planning efforts. Identify plans and procedures for (1) deterring security incidents, (2) detecting, reporting, and responding to incidents, and (3) ensuring continuity of operations in the event of an incident.

◆ Identify and assess threats and vulnerabilities. Support and promote efforts to reduce threats and vulnerabilities and strengthen security. Conduct periodic assessments of the risks. In assessing risk, be sure to identify potential consequences of attacks, methods to screen risks and assess vulnerability, process to encourage voluntary vulnerability assessments. Address implementation and maintenance of protective programs. Identify assets, systems, networks, and functions and related “dependencies/independencies.”

◆ Promote awareness and outreach; foster training. Develop and offer security awareness training for personnel, including contractors and other users of information systems that support your operations. Describe how new technology will be assessed for security

◆ Integrate cyber security with other security efforts.
¶730.2 **Data Privacy Assessment Form**

Information privacy, or data privacy, is sometimes described as "the relationship between collection and dissemination of data, technology, the public expectation of privacy, and the legal issues surrounding them." Privacy concerns often arise when personally identifiable information is collected and stored. *Personally identifiable information* usually refers to any information that can be used to distinguish or trace an individual’s identity, such as their name, Social Security Number, date and place of birth, mother’s maiden name, biometric records, etc., and any other personal information which is linked or linkable to an individual. Addressing the challenges surrounding data privacy often involve software, hardware and “people” — and policies and practices regarding all three.

The checklist below\(^1\) may help research administrators develop an effective data policy surrounding their sponsored-research-related data stored in their information systems. The checklist should be tailored to meet a specific institution’s system and institutional policy requirements regarding stored information and privacy. (For additional discussions of privacy issues, see ¶¶2120.2 and 2130.3.)

◆ **Contact Information**

◆ **General System Information**

1. Name of system:

2. Description of system:

3. What is the purpose of the system or electronic collection of information?

4. Requested operational date?

5. Does this collection create a new privacy act system or is this information collection covered by an existing privacy act system? If so, what is the name of the current privacy act system?

6. What specific legal authorities, arrangements, and/or agreements require the collection of this information?

◆ **Data in the System**

1. What data is to be collected?

2. What are the sources of the data?

3. Why is the data being collected?

4. What technologies will be used to collect the data?

5. Does a personal identifier retrieve the data?

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◆ Attributes of the Data (Use and Accuracy)
1. Describe the uses of the data:
2. Does the system analyze data to assist users in identifying previously unknown areas of note, concern or pattern?
3. How will the data collected from individuals or derived by the system be checked for accuracy?

◆ Sharing Practices
1. Will the data be shared with any internal or external organizations?
2. How is the data transmitted or disclosed to the internal or external organization?
3. How is the shared data secured by external recipients?

◆ Notice to Individuals to Decline/Consent Use
1. Was notice provided to the different individuals prior to collection of data?
2. Do individuals have the opportunity and/or right to decline to provide data?
3. Do individuals have the right to consent to particular uses of the data?

◆ Access to Data (Administrative and Technical Controls)
1. Is the data secured in accordance with institutional/departmental requirements?
2. Describe the privacy training provided to users, either generally or specifically relevant to the program or system?
3. Will contractors have access to the system? If so, will they be trained on privacy principles?
4. Has the retention schedule been established by records management? If so, what is the retention period for the data in the system?
5. What are the procedures for identification and disposition of the data at the end of the retention period?

◆ Privacy Analysis
Given the amount and type of data being collected, discuss what privacy risks were identified and how they were mitigated. Be sure to consider the following:
• Personally identifiable information
• Data completeness
• Data accuracy
• Data access
• Data disclosure
• Documenting data access
• Division of responsibilities
Overview of an ISCM Strategy and Program
National Institute of Standards and Technology

This chapter describes the process for developing an information security continuous monitoring (ISCM) strategy and implementing an ISCM program. A well-designed ISCM strategy encompasses security control assessment, security status monitoring, and security status reporting in support of timely risk-based decision making throughout the organization. It also incorporates processes to assure that response actions are taken. An organization’s strategy for action based on the data collected is as important (if not more important) than collecting the data. The process is as follows:

- **Define** an ISCM strategy based on risk tolerance that maintains clear visibility into assets, awareness of vulnerabilities, up-to-date threat information, and mission/business impacts.

- **Establish** an ISCM program determining metrics, status monitoring frequencies, control assessment frequencies, and an ISCM technical architecture.

- **Implement** an ISCM program and collect the security-related information required for metrics, assessments, and reporting. Automate collection, analysis, and reporting of data where possible.

- **Analyze** the data collected and **Report** findings, determining the appropriate response. It may be necessary to collect additional information to clarify or supplement existing monitoring data.

- **Respond** to findings with technical, management, and operational mitigating activities or acceptance, transference/sharing, or avoidance/rejection.

- **Review and Update** the monitoring program, adjusting the ISCM strategy and maturing measurement capabilities to increase visibility into assets and awareness of vulnerabilities, further enable data-driven control of the security of an organization’s information infrastructure, and increase organizational resilience.

This process is depicted below in Figure 730.3-1.
Risk tolerance, enterprise architecture, security architecture, security configurations, plans for changes to the enterprise architecture, and available threat information provide data that is fundamental to the execution of these steps and to ongoing management of information security-related risks. Security-related information is analyzed for its relevance to organizational risk management at all three tiers.

**Define Your ISCM Strategy**

Effective ISCM begins with development of a strategy that addresses ISCM requirements and activities at each organizational tier (organization, mission/business processes, and information systems).

The guidelines below, though not prescriptive, help to ensure an organization-wide approach to ISCM that best promotes standardized methodologies and consistent practices and hence maximizes efficiencies and leveragability of security-related data. As changes occur, the ISCM strategy is reviewed for relevance, accuracy in reflecting organizational risk tolerances, correctness of measurements, and applicability of metrics. An inherent part of any ISCM strategy is the inclusion of criteria describing the conditions that trigger a review or update of the strategy, in addition to the pre-established frequency audit. Likewise, the organization defines criteria and procedures for updating the ISCM program based on the revised ISCM strategy.

The following policies, procedures, and templates facilitate organization-wide, standardized processes in support of the ISCM strategy:

- Policy that defines key metrics;
Policy for modifications to and maintenance of the monitoring strategy;
Policy and procedures for the assessment of security control effectiveness (common, hybrid, and system-level controls);
Policy and procedures for security status monitoring;
Policy and procedures for security status reporting (on control effectiveness and status monitoring);
Policy and procedures for assessing risks and gaining threat information and insights;
Policy and procedures for configuration management and security impact analysis;
Policy and procedures for implementation and use of organization-wide tools;
Policy and procedures for establishment of monitoring frequencies;
Policy and procedures for determining sample sizes and populations and for managing object sampling;
Procedures for determining security metrics and data sources;
Templates for assessing risks; and
Templates for security status reporting (on control effectiveness and status monitoring).

Policy, procedures, and templates necessarily address manual and automated monitoring methodologies. Additionally, organizations establish policy and procedures for training of personnel with ISCM roles. This may include training on management and use of automated tools (e.g., establishing baselines and tuning of measurements to provide accurate monitoring of operational environments). It may also include training for recognition of and appropriate response to triggers and alerts from metrics indicating risks beyond acceptable limits, as well as training on internal or external reporting requirements.

Establish an ISCM Program
Organizations establish a program to implement the ISCM strategy that is sufficient to inform risk-based decisions and maintain operations within established risk tolerances. Goals include detection of anomalies and changes in the organization’s environments of operation and information systems, visibility into assets, awareness of vulnerabilities, knowledge of threats, security control effectiveness, and security status including compliance. Metrics are designed and frequencies determined to ensure that information needed to manage risk to within organizational risk tolerances is available. Tools, technologies, and manual and/or automated methodologies are implemented within the context of an architecture designed to deliver the required information in the appropriate context and at the right frequencies.

Determine Metrics. Organizations determine metrics to be used to evaluate and control ongoing risk to the organization. Metrics, which include all the security-
related information from assessments and monitoring produced by automated tools and manual procedures, are organized into meaningful information to support decision making and reporting requirements. Metrics should be derived from specific objectives that will maintain or improve security posture. Metrics are developed for system-level data to make it meaningful in the context of mission/Business Or Organizational Risk Management.

Establish Monitoring and Assessment Frequencies. Determining frequencies for security status monitoring and for security control assessments are critical functions of the organization’s ISCM program. For some organizations, dashboards and ongoing assessments are a shift away from the model of complete security control assessments conducted at a distinct point in time. For this shift to be constructive and effective from security, assurance, and resource use perspectives, organizations determine the frequencies with which each security control or control element is assessed for effectiveness and the frequencies with which each metric is monitored.

Considerations in Determining Assessment and Monitoring Frequencies. Organizations take the following criteria into consideration when establishing monitoring frequencies for metrics or assessment frequencies for security controls:

- Security control volatility. Volatile security controls are assessed more frequently, whether the objective is establishing security control effectiveness or supporting calculation of a metric.
- System categorizations/impact levels. In general, security controls implemented on systems that are categorized as high-impact are monitored more frequently than controls implemented on moderate-impact systems, which are in turn monitored more frequently than controls implemented on low-impact systems.
- Security controls or specific assessment objects providing critical functions.
- Security controls with identified weaknesses.
- Organizational risk tolerance.
- Threat information.
- Vulnerability information.
- Risk assessment results.
- Output of monitoring strategy reviews.
- Reporting requirements.

Event-Driven Assessments. Events may occur that trigger the immediate need to assess security controls or verify security status outside of requirements expressed in the ISCM strategy. This may require an assessment that is unplanned, but of the type defined in the ISCM strategy or a customized assessment tailored to address an emerging need (e.g., a change in planned assessment or monitoring frequency). When defining criteria for event-driven assessments, organizations consider events such as incidents, new threat information, significant changes to systems and
operating environments, new or additional mission responsibilities, and results of a security impact analysis or assessment of risk.

**Develop ISCM Architecture**

The core requirements of an architecture implemented to support ISCM are data collection, data storage, data analysis capabilities, and retrieval and presentation (reporting) capabilities. Methodologies are standardized to facilitate efficiencies, intra- and inter-tier information exchange, correlation, and other analysis.

Organizations use automated tools, technologies, and methodologies where appropriate to allow for increased efficiencies and insight including those gained through collection, analysis and dissemination of large volumes of data from diverse sources. The architecture and associated policies and procedures are designed to minimize data calls and maximize data reuse.

**Implement an ISCM Program**

Security-related information (data) is collected as required for predefined metrics, security control assessments are conducted, and the security-related information generated is reported in accordance with organizational policies and procedures. Every control is monitored for effectiveness, and every control is subject to use in monitoring security status. Data sources include people, processes, technologies, the computing environment, as well as any existing relevant security control assessment reports.

Collection, analysis, and reporting of data are automated where possible. Whether manual or automated, the data collected is assembled for analysis and reported to the organizational officials charged with correlating and analyzing it in ways that are relevant for risk management activities. As indicated in the examples above, this may mean taking data from a variety of sources, collected at various points in time, and combining it in ways that are meaningful for the official receiving it at the time that it is requested. Part of the implementation stage of the continuous monitoring process is effectively organizing and delivering ISCM data to stakeholders in accordance with decision-making requirements. Tools and methodologies are chosen for the organization-wide ISCM architecture, in order to help ensure that risk-based decisions are informed by accurate, current security-related information.

Discrete security processes inform and are informed by ISCM data. Organizations also use ISCM data to inform processes that are not primarily used to control information security risk. Similarly, data from those processes can also be used to inform the ISCM program.

**Analyze Data and Report Findings.** Organizations develop procedures for analyzing and reporting assessment and monitoring results. This includes the specific staff/roles to receive ISCM reports, the content and format of the reports, the frequency of reports, and any tools to be used. Also included are requirements for analyzing and reporting results of controls that are not easily automated. It may be necessary to collect additional data to supplement or clarify security-related
information under analysis or provided in initial reports. System- and mission/business-level staff receives and provides reports as required by organizational and mission/business-level policies and procedures.

**Respond to Findings.** Security-related information obtained from monitoring is analyzed and met with appropriate responses. Response to findings at all tiers may include risk mitigation, risk acceptance, risk avoidance/rejection, or risk sharing/transfer, in accordance with organizational risk tolerance.

Response strategies may be implemented over a period of time. As weaknesses are found, response actions are evaluated and any mitigation actions are conducted. Other key system documents are updated accordingly. Security controls that are modified, enhanced, or added as part of the response step of the continuous monitoring process are assessed to ensure that the new or revised controls are effective in their implementations. Going forward, new or revised controls are included in the overall continuous monitoring strategy.


**Review and Update the Monitoring Program and Strategy.** ISCM strategies and programs are not static. Security control assessments, security status metrics, and monitoring and assessment frequencies change in accordance with the needs of the organization. The continuous monitoring strategy is reviewed to ensure that it sufficiently supports the organization in operating within acceptable risk tolerance levels, metrics remain relevant, and data is current and complete. The strategy review also identifies ways to improve organizational insight into security posture, effectively supports informed risk management decision making/ongoing authorizations, and improves the organization’s ability to respond to known and emerging threats.

The organization establishes a procedure for reviewing and modifying all aspects of the ISCM strategy, including relevance of the overall strategy, accuracy in reflecting organizational risk tolerance, accuracy/correctness of measurements, and applicability of metrics, reporting requirements, and monitoring and assessment frequencies. If any of the data collected is not required for reporting purposes or found to be not useful in maintaining or improving the organization’s security posture, then the organization considers saving resources by discontinuing that particular collection.

Examine consolidated information to determine if there are common weaknesses/deficiencies among the organization’s information systems and propose or request solutions. Status reports and metrics are analyzed to determine if there are any security trends that suggest changes to the monitoring strategy may be necessary.
§790 Knowledge Check

AIS editors

The Q&As at §790.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 700 has been understood. *Note: For the answer key for §790.1, see §790.3, which appears on a separate page (page 790:5) for testing purposes.*

Discussion topics at §790.2 are designed to engender dialogue among staff on general issues of importance in the field.

§790.1 Q&As

1. According to §705, perhaps the single most important information resource for a sponsored programs office is
   (a) Authentication software
   (b) A database
   (c) An encryption algorithm
   (d) A data integration server

2. What is a failover system?
   (a) A server system that has repeatedly failed to function as promised.
   (b) A paper-based system that duplicates the functionality of an existing electronic system.
   (c) A server system that automatically and immediately takes over if the primary server fails.
   (d) A server system that by definition is not state of the art.

3. Most data leaks are
   (a) The result of a technical attack against your computer system by random hackers outside your community
   (b) The result of hardware failures
   (c) The result of software failures
   (d) Perpetrated by disgruntled insiders (employees) or through trickery

4. Which of the following would you contact to purchase a “certificate,” typically a bit of software that establishes and assures the “identity” of a computer?
   (a) Google
   (b) Yahoo
5. What is a shadow system?
(a) A system used to either replicate some functionality of an institution’s central system or some functionality that such system is not providing that the user thinks is necessary
(b) An individual who provides the necessary backup protocol for the system
(c) A system that allows remote access to the central server
(d) A fully integrated system used to provide services that is in testing phase

6. What is authentication?
(a) The process of establishing that an electronic payment has been processed
(b) The process of verifying that a requested report has been processed
(c) The process of establishing that a given user is who he or she says he or she is
(d) The process of establishing an integrative reporting system

7. Using an application service provider (ASP) can offer certain advantages to a small institution including all of the following EXCEPT:
(a) As the research portfolio grows, it can do so without overtaxing existing information systems infrastructure.
(b) It will provide access to (presumably) more sophisticated analytical tools.
(c) No specialized IT staff will need to be hired.
(d) Tracking metrics is more easily down by an outside vendor.

8. Security of an information system typically encompasses all of the following EXCEPT:
(a) Shadow security
(b) Network security
(c) Data security
(d) User security
1790.2 *Discussion Topics*

1. There is always a build or buy consideration that must be factored into any decision about information systems. What are some of the factors that should go into this decision making?

2. There is no standard recipe for implementing an information system for use in sponsored research administration. Do you agree or disagree with this statement and why?

3. It is up to an institution to determine what level of cost and access control is acceptable. This implies that there could be a trade-off between control and cost. Do you agree or disagree and why?

4. How effectively does your information system(s) interact with or integrate with other systems at your institution, such as electronic research administration, contracting, payroll, human resources, etc.? What role can you play in ensuring a helpful integration, as appropriate?

5. Are the reports you provide principal investigators and administrators adequate? How do you determine this? Is there any opportunity provided for PIs and others to request a customized report, or is access to data provided so that PIs and others can customize their own reports? Why or why not?

6. What is your electronic records retention policy? Does the policy provide adequate protection/compliance for sponsored research-related records? Does the policy have separate criteria for different types of emails and documents and emails/documents generated by different types of personnel? How does the policy dovetail with your paper records retention policy?
¶790.3 **Answer Key**

Following are the correct answers to the questions included at ¶790.1.

1. (b) A database

2. (c) A server system that automatically and immediately takes over if the primary server fails.

3. (d) Perpetrated by disgruntled insiders (employees) or through trickery

4. (d) Verisign

5. (a) A system used to either replicate some functionality of an institution’s central system or some functionality that such system is not providing that the user thinks is necessary

6. (c) The process of establishing that a given user is who he or she says he or she is

7. (d) Tracking metrics is more easily down by an outside vendor.

8. (a) Shadow security
PLACE TAB

¶ 900

Electronic Research Administration
Chapter 900
Electronic Research Administration

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Introduction

This chapter discusses requirements and strategies for effective implementation of electronic research administration, with specific emphasis on the important Grants.gov initiative. Electronic research administration — and its companion, information technology — have become essential tools for today’s research administrators. (For a discussion of information technology, see Chapter 700.)

Stephen Dowdy of the Massachusetts Institute of Technology and Lori Schultz of the University of Arizona clearly focus this chapter on Electronic Research Administration, a process that Dowdy described as “seeking to streamline research administration by using computer technology and the power of the Internet.” This topic is so vast that one could easily devote entire books to it. Dowdy and Schultz have chosen to deal primarily with the ERA systems that are used by the major federal research sponsors.

The chapter provides an extremely thorough description of Grants.gov and how it is intended to work. The authors paint a picture of the future sponsored research enterprise operating in a totally electronic environment. While we aren’t there yet, there’s no doubt that this is where we are going. There is no turning back. Whether we love it or not, they provided us with a solid understanding of what lies ahead.

Chapter 900 will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶905, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶920), practical tools (at ¶930), case studies (¶940), and statistics and survey results (at ¶960). A “knowledge check” containing Q&As and discussion topics is included at ¶990.
Electronic Research Administration (ERA) is the process of performing research administration electronically. It encompasses everything from creating a spreadsheet template to printing a funding agency’s form to implementing complex database management systems to handle the entire research administration life cycle.

In the past, ERA meant building a home page for a sponsored research office, using the Web to locate a funding opportunity, incorporating e-mail lists in the daily work of the sponsored research office, making publications available electronically, and/or creating faculty profile databases. Over the past decade with the rise of the Internet, ERA has dramatically changed the job of the research administrator. Today the office of sponsored programs (OSP) has embarked on a new culture of research administration. Universities are using ERA to simplify and make more efficient, award acquisition and administration for all offices within the institution. Funding agencies are using ERA to improve the efficiency of their operations. By automating the complex processes associated with research administration, all parties seek to streamline research administration by using computing technology and the power of the Internet.

Since ERA can encompass everything from Excel files to complex database management systems, this chapter will focus primarily on the standard processes and systems being used and implemented by the federal government. Attempting to catalogue and describe every ERA system in use by an OSP would be impossible at this point given the number of systems spread across the landscape of ERA. One thing is certain, however: ERA is here to stay and is now ready to mature and will be woven into the fabric of the entire research enterprise. The ultimate goal of ERA is that all parties will be able to conduct all aspects of the life cycle of a grant electronically.

Why ERA?

ERA has been around for many years. Early systems developed by universities and federal agencies have long been replaced by more robust state-of-the-art technologies. Many agencies and universities continue to rely on legacy systems to conduct their day-to-day operations, while others have implemented enterprise-level ERA systems that encompass the grant lifecycle. While end-users often are reluctant to give up their current legacy system, in the fast-moving information technology (IT) industry, a system is considered stable and “old” as soon as it is properly implemented. Legacy systems will eventually be upgraded, replaced, or archived. Today, almost uniformly, both parties — the sponsors and the research community — are
working to adopt new processes, systems, and rapid technology changes to handle
the evolving nature of ERA.

**Institutional Readiness**

Institutional readiness is as diverse as the student populations enrolled at an in-
stitution. Some institutions have well-established post-award systems but lack
pre-award capabilities or vice versa. Some institutions have systems that handle
pre-award, post-award, and compliance, but those systems may not be integrated.
Others have embarked on major enterprise implementations in an attempt to inte-
grate functions from pre-award proposal development and submission to compli-
ance (Conflict of Interest, Human Subjects (IRB), Animal Care (IACUC) to contract
negotiation to award setup/maintenance, and finally, to closeout.

**‘Legacy’ Systems**

Generally speaking, yesterday’s legacy systems were often stovepipe applications.
That is, the pre-award system met the needs of the pre-award office but had little or
no interaction with the financial system. The financial system had little to no inter-
action with the human subjects system or the intellectual property system. In effect,
each ERA process was a stand-alone application, developed over time, to satisfy a
particular business process or transaction.

With yesterday’s technologies, this was often unavoidable since often these ERA
systems were simply data storage to capture information created in a paper-based
process. As the paper transactions moved from office to office, person to person, the
relevant data was re-keyed into these stovepipe applications leaving some data to
only exist on the paper form. Simply put, if the data on the form was of little use or
value to an office/person, it was not captured since data storage costs were often a
deciding factor on the amount of data to capture. Disk space used to be expensive,
but this created future costs in storing redundant data, reconciling inconsistencies
between disparate systems, and not having consistent data for decision support.

The goal of our systems today is to fully integrate all of these disparate systems
and to collect data once, at its inception, without the need of redundant data en-
try. Today, the cost of equipment and disk storage is not generally an obstacle. The
major obstacle is the price of the software (whether purchasing a vendor solution or
developing a solution internally), but even more so, the implementation costs.

**ERA Planning**

Today most institutions are at varying stages in planning for the continuing evo-
lution of ERA. Some are (or soon will be) issuing requests for proposals (RFP) for
vendor solutions or support. Some have decided to build their own systems or team
up as part of a consortium of like-minded institutions. Others have decided to wait
until the seas calm and allow others to navigate the ERA ocean. For small schools,
ERA can be challenging given resource constraints and institutional priorities.

In almost every case, the urgency of establishing a state-of-the-art ERA system
continues to be driven by Grants.gov application submission. (see discussion on
Some schools continue to use the free, Grants.gov-provided Adobe form solution, while others larger schools are investing in a system-to-system (S2S) capability. Vendors of all sizes offer fully integrated ERA systems or options that make system-to-system an achievable goal. As of this writing, Grant.gov has begun work on a web-based submission system that will provide a third alternative to apply (S2S, Adobe, web-based.)

**Self-Assessments**

All institutions are well advised to undertake self-assessments of capabilities, gaps, and possible ways to address the wide range of issues that comprise the electronic research endeavor. They must address the cost of change, including hardware, software, and personnel. Also, schools need to define a vision, recognizing what they can/must do internally and what they might be able to adapt from others.

Whatever systems are developed or purchased, institutions need to understand their individual research process and make an institution-wide commitment to ERA. Most importantly, institutions should focus on the business of research administration, and then develop technology to meet the business needs.

For years, schools have had elaborate systems for dealing with student information, human resources, payroll, accounts payable, purchasing, and general ledger activities. Only now are many of these institutions able to invest in the technologies to incorporate their ERA systems into the overall architecture of their other systems of record. Many schools, in conjunction with the budget and planning offices, are attempting to provide “leading indicators” to assist in budget forecasting. ERA systems bring a wealth of information to senior institutional officials. “Business Intelligence” is now emerging as a critical tool once the ERA have been implemented and data can be correlated to bring some meaning to the vast amount of data being captured in robust, mature ERA systems.

**Data Integration**

Having reliable, accurate, aggregate data from submitted proposals in an attempt to develop models that may assist in developing trending and predictions about future awards is just one example of the inter-linkage of the ERA data being collected internally at institutions. Some institutions are attempting to merge their human resource and payroll data with their ERA activities. All of these activities will help move ERA into the forefront of the institutions’ acceptable business processes. (For additional coverage of information systems, see Chapter 700.)

The federal ERA initiative is the driving force behind many of the major projects currently underway at institutions and is the reason that many universities have started to address ERA in a much more focused approach than previously undertaken. Some of the ERA transactions currently being handled via computer technology are included as Figure 905.1-1.

**The Reality of ERA**

Universities have found that adopting ERA solutions helps to obtain research funding, maintain its research endeavor, and use staff resources effectively. The goals of
ERA include requirements such as the following:

- Implement highly reliable, secure systems that provide a complete set of tools that help ensure data quality and integrity across the entire grant process
- Implement user friendly systems that guide users through the process, using error checking and validations that smooth transactions, including proposal submission
- Provide a state-of-the-art architecture that allows the systems to be responsive to the ever-changing business processes, policies, and technologies
- Include sufficient training for all personnel required to use ERA systems and reach out to the stakeholder communities to ensure they are informed, trained, and having their needs met
- Capitalize on existing systems to save costs

Figure 905.1-1. Types of ERA Transactions

Types of transactions currently being handled electronically are listed below. Some of these transactions are being conducted at the federal level, while others are being conducted at universities, although institutional implementation of ERA varies.

**Pre-Award**

- Identification of funding opportunities
- Proposal development
- Institutional and faculty profiles
- Electronic approval and routing
- Budget development
- Cost sharing information
- Subrecipient tracking

**Protocol Management**

- Regulatory protocol development and approvals including IRB, IACUC, IBC, and radiation safety
- Electronic submission of protocols
- Electronic notification of protocol status
- Animal facilities management and purchasing

**Clinical Trials Management**

- Budget preparation
- Integration and use of approved university costs/charges
- Patient/procedure scheduling
- Sponsor billing
- Financial analysis

**Conflict of Interest Management**

- Prepare, submit and maintain COI disclosures
- Track significant financial interests

**Submission of Proposals to Sponsors**

- Electronic submissions and tracking of proposals to sponsors who support electronic submissions

**Electronic Notification of Award Notices**

- Automatic notification
- Automated project setup

**Post-Award Management**

- Project financial management
- Sponsor invoicing
- Project closeout and reporting

**Reporting**

- Timely and accurate reporting at all phases of the project life cycle
- Ability to link sponsored project data with other university systems of record
◆ Provide a good return on investment.

Each year the government invests billions of dollars in grant awards to tens of thousands of investigators worldwide. In Grants.gov alone, applicants submit approximately 250,000 grant applications each year. FastLane handles approximately 40,000 NSF proposals per year. The NIH sees over 27,000 R01 applications per year, 40% of which are submitted via S2S.

Federal agencies must support thousands of peer-review meetings and disseminate these applications to reviewers prior to review sessions. This massive enterprise generates hundreds of millions of pieces of paper each year. The costs of managing, duplicating, processing, storing, and entering data, and reconciling all of the information generated during the course of a grant are enormous. Technology holds the hope of significantly reducing the costs for all parties involved in the research enterprise.

1905.2 Agency-Specific Grants Management Systems

There are a variety of agency-specific ERA systems utilized within the federal government and some private funding agencies.

NSF’s FastLane and Research.gov

The National Science Foundation (NSF) system, FastLane, is the first of all federal ERA systems. Of the federal systems, FastLane is the most mature system and encompassed all of NSF’s business transactions, until the rollout of Research.gov. Research.gov will become the replacement for FastLane, and, as of this writing, is integrating with FastLane as the NSF begins to provide the next generation of grants management capabilities. The following services are available in FastLane/Research.gov and will transition to a common NSF look and feel over time:

◆ Proposal Submission and Status
◆ Financial Services
◆ Project Reporting
◆ Notifications and Requests
◆ User Management

While NSF proposals via Grants.gov, many institutions and investigators still choose to use FastLane instead. FastLane is such a mature system that Grants.gov cannot handle all of NSF’s proposal submission scenarios. A prime example is collaborative proposals. While Grants.gov is able to accept subaward budgets, Grants.gov has no mechanism, at this time, to link collaborative proposals together.

NIH eRA Commons and ASSIST

The National Institute of Health (NIH) has two systems that handle eRA transactions: the eRA Commons and ASSIST:

◆ The eRA Commons is not an application submission system but accepts proposals via Grants.gov. The eRA Commons also includes the ability to submit progress reports, financial reports, manage trainees, submit “just-in-time”
information, and status checking.
◆ ASSIST (Application Submission System & Interface for Submission Tracking is the NIH’s new system for the preparation, submission, and status tracking of grant applications through Grants.gov. ASSIST is a web-based system that allows multi-users to work on a single application, provides validation of NIH and Grants.gov business rules, and offers submission status tracking for both Grants.gov and eRA Commons. As of this writing, ASSIST is available for multi-project grant applications and is an option for some single project competing grant applications.

NASA NSPIRES
NSPIRES is the NASA Solicitation and Proposal Integrated Review and Evaluation System. This system includes NASA solicitations announcements and Notice of Intent (NOI) and proposal submissions in a web-based environment. Proposals are submitted either through NSPIRES or via Grants.gov

Other Systems
The Department of Energy has a number of systems for application submission and award management:
◆ Portfolio Analysis and Management System (PAMS): used to apply for and track proposals to the DOE Office of Science
◆ ARPA-E eXchange: required for proposals to ARPA-E
◆ EERE eXchange: required for concept papers and applications to EERE
◆ FedConnect: used to accept/administer awards for the DOE and the Department of Interior (among others)

The Department of Education (ED) G5 system allows for proposal file upload and submission, but ED proposals may also be submitted via Grants.gov. The agency also allows for submission of progress reports and some post-award notifications. Other federal agencies have some capabilities in certain business transactions. However, with the introduction of Grants.gov, many have put their efforts in working with Grants.gov to be able to accept proposals via Grants.gov.

Non-federal agencies and non-profit sponsors have also implemented proposal and grant management systems, including (but not limited to):
◆ The American Heart Association
◆ Juvenile Diabetes Research Foundation
◆ March of Dimes
◆ ProposalCENTRAL: includes functionality for the American Cancer Society, Cystic Fibrosis Foundation, the Alzheimer’s Association, and more.
◆ FLUXX: includes the Leukemia and Lymphoma Society, Knight Foundation, the Kresge Foundation, and others.

It is also likely that your state has some systems for procurement and respond-
ing to bids for state agencies. Keeping track of eRA systems, rules, and changes has become a full-time occupation for many research administrators.

1905.3 Background of the Federal ERA Initiative

The federal ERA initiative was born as a result of pressure within the federal government to downsize and streamline operations. While many agencies had already invested in ERA activities, the university community was concerned about the number of disparate federal ERA systems. There were proposal preparation systems at NSF, NASA, DOE, and ED, among others. University investigators and administrators had to learn a plethora of systems that seemed to emerge daily and change often. Many had to hire dedicated staff just to learn the variety of systems in order to train and to assist faculty and other university employees that had to interact with these systems.

The agencies were attempting to solve their internal needs without fully understanding the extreme burden these systems were placing on their external community. Initial attempts at getting all 26 grant-making agencies to agree upon a single solution failed. These initial attempts were the result of university and federal colleagues attempting to solve the problem with no driving force pushing the agencies to participate.

P.L. 106-107

In 1999 Congress passed the Federal Financial Assistance Management Improvement Act of 1999, Public Law (P.L.) 106-107, which was a key driving force behind ERA at the federal level. The purposes of P.L. 106-107 are to

1. improve the effectiveness and performance of federal financial assistance programs,
2. simplify federal financial assistance application and reporting requirements,
3. improve the delivery of services to the public, and
4. facilitate greater coordination among those responsible for delivering the services.

In 2001, 26 Federal agencies presented a plan to Congress to address application submission and reporting. The original scope of P.L. 106-107 was find, apply and report. The find and apply piece of the plan became what is now Grants.gov. The report piece include in the original legislation was not accomplished before the sunset of P.L. 106-107 in 2007.

P.L. 106-107 was not reauthorized by Congress when it sunsetsed in 2007. As shown above, the number of agency systems handling common features such as proposal submission has only grown since then. This remains an ongoing concern for eRA and institutions attempting to streamline solutions.

Some Legislation that impacts ERA:

◆ Privacy Act of 1974 (P.L. 93-579) and Amendments — establishes the foundation of federal policy for protecting and sharing personal information
◆ Government Performance Results Act of 1993 (P.L. 103-62) — strives to improve federal program effectiveness by focusing on measurable results and service quality
◆ Information Technology Management Reform Act (Clinger-Cohen Act) of 1996 (P.L. 104-106) — calls for sound investment through capital planning that is tied to agency missions and strategic goals

◆ Section 508 of the Rehabilitation Act of 1998 (P.L. 105-220) — ensures accessibility for all users

◆ E-Government Act of 2002 (P.L. 107-347) — furthers the President’s Management Agenda that promotes electronic government services

◆ Federal Information Security Management Act of 2002 (Title III of P.L. 107-347) — mandates attention to security in all agency applications and accountability to OMB and Congress

◆ Government Paperwork Elimination Act (GPEA) (Title XVII of P.L. 105-277) requires that Federal agencies use electronic forms, filing, and signatures to conduct official business with the public.

◆ Federal Funding Accountability and Transparency Act of 2006 (P.L. 109-282) — requires full public disclosure of all entities/organization that receive federal funds

◆ Digital Accountability and Transparency Act of 2014 (P.L. 113-101) — requires common standards for financial data provided by federal agencies and expands what is reported on USASpending.gov.

Looking to the Future

The qualities and attributes of a good ERA system from the investigator’s perspective are often quite different from the central administration, vendors, Grants.gov, and other agency-specific systems. Federal ERA systems primarily are designed to promote and protect the interests of federal agencies, not grantees, while grantee ERA systems primarily are designed to promote and protect the interests of grantees (institutions and individual investigators), not federal agencies.

However, in all these systems, the ultimate solution must keep in mind the goal of the principal investigator, which is to do research and not become a data entry operator and spend too much time on “administrivia.” At times an institution may need to shift the burden to the federal government or to the central offices at the university if doing so will allow faculty to spend more time doing science and mentoring students. The goal of any ERA system should be to manage the sponsored programs life cycle more efficiently for the investigator.

Collaborative Effort

The development and/or implementation of any federal ERA system should be a collaborative endeavor of all parties involved. Partners should include the scientists and administrators of the institution as well as the vendors that provide ERA software and services to assist investigators with application submission and other grant-related transactions. The goal of these working partners is to help develop a creative and innovative environment that strives to improve all aspects of the ERA enterprise. Successful organizations will see beyond existing procedures and consid-
er entirely new approaches that may bear little resemblance to the current business model or systems in place.

Federal agencies and universities alike seek to use ERA to lower costs and administrative effort, expedite grants processing, and provide better quality information to their respective constituents. Today ERA is a collaborative endeavor between the federal government and the communities it serves, which has the potential to benefit all parties involved resulting from the ERA-enabled secure, interactive business processes.

¶905.4 Grants.gov

Grants.gov — an initiative that has had unparalleled impact on the grants community — is one of the 24 federal cross-agency “e-government” projects focused on improving access to services via the Internet. Grants.gov is the single access point for over 900 grant programs offered by the 26 federal grant-making agencies and allows organizations to electronically find and apply for competitive grant opportunities from all federal grant-making agencies. The Department of Health and Human Services (HHS) is the managing partner for the initiative.

Grants.gov FIND Function

All discretionary grants offered by the 26 federal grant-making agencies can be found on Grants.gov. The FIND functionality carries a program synopsis with relevant links to an individual agency’s full program announcement, version history to track changes to the announcement, and information on how to APPLY.

For more on the Grants.gov FIND Function, visit: www.grants.gov. Click on “Find Grant Opportunities.”

Grants.gov APPLY Function

The APPLY function is the actual application for federal financial assistance (the proposal). Grants.gov allows organizations (and individuals in the case of some fellowships) to electronically apply for competitive grant opportunities from all federal grant-making agencies. Grants.gov is the single access point for over 1,000 grant programs offered by the 26 federal grant-making agencies.

Applying for assistance awards involves “core” and “noncore” application data elements. “Core” elements include those defined by the SF 424 R&R form set, a government-wide standard form for grant applications, a piece of data required by two or more agencies, and the institutional Dun and Bradstreet number, which has emerged as the universal identifier recognized by OMB. (Once registered with Dun and Bradstreet, an institution receives a unique nine-character identification number, a Data Universal Number System (DUNS) number.)

All other data elements would be “noncore.” These include agency-specific, program-specific, and solicitation-specific data elements. Grants.gov, supported by OMB, has requested that agencies look at the core data elements and identify those that are agency specific. The process of identifying agency-specific data elements involves comparing agency-specific forms with the core form, identifying and consolidating agency-specific application packages, and filling out tables in common
formats for agency-specific-data to be implemented in the Grants.gov storefront.

For more on the Grants.gov APPLY Function, visit www.grants.gov. Click on “Apply for Grant.”

Application Submission

There are essentially two options for universities to submit applications to Grants.gov:

1. Submit proposals directly to Grants.gov using an electronic system that is capable of a “system-to-system” (S2S) exchange.

2. Submit proposals using electronic Adobe forms.

The Grants.gov S2S project is very important. The goal is to develop a standards-based interface using industry-leading practices that can be adaptive to changes driven by legislation and agency-specific requirements. Because each agency may require unique forms for its opportunities, and Grants.gov must comply, the challenge is to manage the burden on the applicant’s systems that result from these changes. Both vendor and homegrown systems can electronically transmit data directly from one’s institutional computer system to the Grants.gov system. Many vendors, institutions, and consortia of institutions have worked to create or modify their systems to be able to interact directly with Grants.gov.

The second option, using Adobe forms, allows applicants to download the application package to their local desktops and complete the application offline before submitting the completed package to Grants.gov.

As of this writing, the Grants.gov team is working on defining a web-based system for completing and submitting application packages. This new system will allow collaboration by multiple users and the re-use of data elements from previous submissions.

(For more on using the S2S interface and Adobe forms, see Figure 905.4-1.)

After completing the Adobe forms, the user must forward the completed forms to an Authorized Organization Representative (AOR) at the institution. (This safeguards an institution from individuals who may attempt to submit grant application packages without permission.) These form packages can often exceed the limitations on the size of e-mail attachments allowed by the institution’s mail servers. In that case, the Adobe forms will need to be copied to a Web server, stored on a thumb drive, or burned to a CD to forward the completed application package to the central office. Once the AOR approves the application, he or she will use the user ID and password obtained during the Grants.gov registration process to upload the proposal to the Grants.gov Web site.

System-to-System (S2S) Exchange

Grants.gov has defined a system-to-system (S2S) interface with universities and vendors to submit proposals to Grants.gov without the use of the Adobe application packages. Institutions have long voiced their desire to have an S2S capability for transmitting proposals to Grants.gov. The application error rate for S2S submissions is quite low compared to submissions with Adobe forms.

Equally important is the concept of “key once, at its inception, use many.” Or-
organizations want to capture the data within their own ERA systems without having to re-key that data into Adobe forms. In the current version of the Adobe forms, the data submitted in one application cannot be transferred to another Adobe form and used again; all data must be re-keyed into each Adobe submission.

Because Grants.gov technical staff resources are limited and the demand for access by institutions and other interested parties is unknown but potentially significant, it was imperative for Grants.gov to identify a solution that potential users could implement with a minimum level of technical support from Grants.gov. Therefore Grants.gov has created a Reference Implementation (RI) that allows an organization to conduct the entire S2S process at its home institution.

The RI provided by Grants.gov is basically a toolkit. This toolkit provides both the client side and server side of the exchange. That is, once an organization has successfully installed the RI, it not only can see what is happening on its end of the process, but it can also see the process from the Grants.gov side since both pieces of the puzzle are installed locally. This greatly enhances the understanding of the entire process and gives the organization the ability to have a meaningful dialog with the Grants.gov staff when issues surface.

Grants.gov uses Web services to conduct the S2S exchange process. From the applicant’s point of view, the following Web services are currently implemented:

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**Figure 905.4-1. The Grants.gov Process**

The first step in submitting an application to Grants.gov is to locate the opportunity using the FIND function. There are three pieces of data that uniquely identify an opportunity:

1. **Catalog of Federal Domestic Assistance (CFDA) number**
2. **Funding Opportunity Number**
3. **Funding Opportunity Competition ID**

One will need these pieces of information to apply for a grant. Generally, one can use the CFDA number and/or the Funding Opportunity Number and Grants.gov will display a list of all opportunities that match the criteria. The Funding Opportunity Competition ID is not used by all agencies.

Once a grant opportunity has been located, select “Application Package” tab at the top of the page to download the Adobe application package and instructions. For those institutions implementing the S2S interface (see below), the institutional system will need to store the three pieces of information listed above in order to initiate the Web service call to Grants.gov for subsequent transmission of the proposal from an internal system.

Adobe

In order to view application packages and instructions, one will also need to download and install the free Adobe Reader software which is available at the Grants.gov Web site.
Regardless of the transmission vehicle, OSPs should urge all persons responsible for the preparation of proposals to get fully trained on the use of one of the new proposal preparation tools (either the university’s internal system with S2S capabilities or the use of the forms package provided by Grants.gov). Adequate training will ensure that when a required Grants.gov submission is encountered, everyone is fully prepared.

Streamlined System

One important outcome from P.L. 106-107 and Grants.gov is that the federal agencies are beginning to realize that the university community deals with many federal
agencies and everyone agrees that having multiple, disparate systems and processes is costly to both universities and the government. In addition everyone is beginning to accept the folly of having universities learning how to use multiple and divergent federal agency systems that have been developed and paid for at public expense. Moreover this explosion of federal systems prevents effective development of third-party solutions since no system-to-system interface is clearly defined. Now, everyone is talking standardization, and that is an encouraging sign.

**Authorized Officials**

An institution must be registered with Dun & Bradstreet (D&B) in order to apply to Grants.gov. D&B provides the institution a unique nine-character identification number, a Data Universal Number System (DUNS) number (see www.dnb.com/us). Most universities already have a DUNS number; in fact, many universities have multiple DUNS numbers. Each organization must decide upon one DUNS number that will be used for all applications to Grants.gov, because each user’s authorization to submit to Grants.gov is linked to the DUNS number.

**SAM.gov**

After obtaining a DUNS number, the institution must register with the System for Award Management (see www.sam.gov). This is a one-time process. When registering with SAM, the institution will be required to designate an “E-Business Point of Contact” (POC). This individual will become the sole authority at the institution with the capability of designating, or revoking, an individual’s ability to submit grant applications on behalf of an institution through Grants.gov.

SAM.gov consolidated the functionality in CCR, ORCA, and EPLS. SAM validates applicant information and electronically shares the secure and encrypted data with federal agencies’ finance offices to facilitate paperless payments through electronic funds transfer (EFT). SAM houses organizational information, including representations and certifications and allows Grants.gov to use that information to verify an institution’s identity.

**Institutional Representatives**

Prior to submitting grant application packages, representatives of the institution need to register to submit on behalf of the institution. The institution’s POC, identified during SAM registration, must authorize someone to become an Authorized Organization Representative (AOR). This safeguards an institution from individuals who may attempt to submit grant application packages without permission.

When an AOR registers with Grants.gov, the institution’s POC will receive an email notification. The POC must then log into Grants.gov (using the DUNS number user ID and the “MPIN” password provided by SAM) and approve the AOR, thereby giving someone permission to submit applications. When an e-business POC approves an AOR, Grants.gov will send the AOR a confirmation e-mail.

For institutions planning on or currently implementing an S2S solution, the institution will need to register its server’s digital certificate with Grants.gov. For S2S solutions, the server “signs” the application on the institution’s behalf.
gov assumes that only authorized institutional officials can “push the button” that causes the server to initiate the exchange with the Grants.gov server.

905.5 E-Authentication

OMB issued guidance to the federal agencies to implement the Government Paperwork Elimination Act (GPEA). GPEA requires federal agencies to allow individuals or entities the option to transact business with the government electronically and to maintain those records electronically as well. According to GPEA, the agencies had until October 21, 2003, to comply with the act. OMB asserted that in enacting GPEA, Congress addressed the legal effect and validity of electronic signatures or other electronic authentication:

GPEA, Section 1707

Electronic records submitted or maintained in accordance with procedures developed under this title, or electronic signatures or other forms of electronic authentication used in accordance with such procedures, must not be denied legal effect, validity, or enforceability because such records are in electronic form.

Public trust in the security of information exchanged over the Internet plays a vital role in the government’s transition to computer-based exchanges. The “e-authentication” initiative is another one of the government’s priorities. E-authentication makes that trust possible.

Standards for ‘Identity-Proofing’

E-authentication sets the standards for the identity proofing of individuals and businesses, based on the risk of a particular business transaction. The initiative focuses on meeting the authentication requirements of the e-government initiatives by building the necessary infrastructure to support common, unified processes and systems for governmentwide use. For each business transaction and ERA system, the agencies must conduct a risk assessment. The risk assessment measures the relative severity and the potential harm in the event of an identity authentication error.

Authentication Levels

There are four potential levels of authentication that a federal agency can apply to a particular electronic transaction:

- **Level 1** — Level 1 is used when little or no confidence exists in the asserted identity. For example, Level 1 credentials allow people to bookmark items on a Web page for future reference.

- **Level 2** — On balance, where confidence exists that the asserted identity is accurate, Level 2 is used. Level 2 credentials are appropriate for a wide range of business with the public where agencies require an initial identity assertion (the details of which are verified independently prior to any federal action).

- **Level 3** — Level 3 is appropriate for transactions needing high confidence in the
asserted identity’s accuracy. Users may use Level 3 credentials to access restricted Web services without the need for additional identity assertion controls.

◆ Level 4 — Level 4 is appropriate for transactions needing very high confidence in the asserted identity’s accuracy. Users may present Level 4 credentials to assert identity and gain access to highly restricted Web resources, without the need for further identity assertion controls.

For the APPLY function in Grants.gov, for example, the application for federal assistance has been scored at a Level 2. The DUNS/SAM registration process meets the requirements of a Level 2 assertion. This is good news for the agencies and for the university community since this helps pave the way for the university community to use strong authentication for electronic signatures in lieu of a true digital signature on electronic documents.

**Strong Authentication**

So, what constitutes strong authentication? One of the most important rules is that a user’s password must never travel across an open network as clear text. Clear text means that the data is not encrypted. The Internet is an open network and more than likely, a campus’ network is open. When developing or installing third-party ERA systems, one should ensure that the system will comply with a Level 2 assertion and that the password is protected at all times on the open network.

Software programs are readily available to grab pieces of information off of the network. This is known as packet sniffing. Many companies and universities deploy firewalls to help prevent these types of attacks. The problem with a firewall is that it assumes the “bad guy” is on the outside. Most of the really damaging incidents of computer crime are carried out by insiders. Firewalls also have a significant disadvantage in that they restrict how users can use the Internet. Firewalls may prevent researchers from accessing the ERA system while away from the campus network. For the university environment, this is often unacceptable.

**Cross-Authentication**

Identity management is now perceived as one of the major information technology challenges. The e-authentication project is creating technologies that will allow for access to multiple applications via single sign-on capability. The project aims to build an infrastructure and policy foundation for common authentication services. This service is authorized to issue authentication credentials for use by the FirstGov (Grants.gov is a partner) and other participating federal government agencies.

The long-range goal is to move to an enterprise identity management solution and federated identity. In effect, a “web of trust” will be created. Some federal agencies (like the NSF with Research.gov) are using InCommon for federated identities, which means that if your institution uses InCommon, you can login to the federal site using your institution’s credentials. Eventually, the hope is that PIs and research administrators will be able to use the same log-in credentials for all agency systems. Gone will be the days of trying to remember multiple user ID/password combinations for the variety of ERA systems with which organizations must interact.
Figure 905.4-3. Electronic Signature Options

The Government Paperwork Elimination Act (GPEA) of 1998, P.L. 105-277, offers the following two options and guidance on electronic signatures.

(1) Non-Cryptographic Methods of Authenticating Identity — Personal Identification Number (PIN) or Password: A user accessing an agency’s electronic application is requested to enter a “shared secret” (called “shared” because it is known both to the user and to the system), such as a password or PIN. When the user of a system enters her name, she also enters a password or PIN. The system checks that password or PIN against data in a database to ensure its correctness and thereby “authenticates” the user. If the authentication process is performed over an open network such as the Internet, it is usually essential that at least the shared secret be encrypted. This task can be accomplished by using a technology called Secure Sockets Layer (SSL), which uses a combination of public key technology and symmetric cryptography to automatically encrypt information as it is sent over the Internet by the user and decrypt it before it is read by the intended recipient. SSL currently is built into almost all popular Web browsers, in such a fashion that its use is transparent to the end user. Assuming the password is protected during transmission, as described above, impersonating the user requires obtaining the user’s password. This may be relatively easy if users do not follow appropriate guidelines for password creation and use. Agencies should establish adequate guidelines for password creation and protection.

(2) Public/Private Key (Asymmetric) Cryptography — Digital Signatures:

(a) To produce a digital signature, a user has his or her computer generate two mathematically linked keys — a private signing key that is kept private, and a public validation key that is available to the public. The private key cannot be deduced from the public key. In practice, the public key is made part of a “digital certificate,” which is a specialized electronic file digitally signed by the issuer of the certificate, binding the identity of the individual to his or her private key in an unalterable fashion. The whole system that implements digital signatures and allows them to be used with specific programs to offer secure communications is called a Public Key Infrastructure, or PKI.

(b) A “digital signature” is created when the owner of a private signing key uses that key to create a unique mark (the signature) on an electronic document or file. The recipient employs the owner’s public key to validate that the signature was generated with the associated private key. This process also verifies that the document was not altered. Since the public and private keys are mathematically linked, the pair is unique: only the public key can validate signatures made using the corresponding private key. If the private key has been properly protected from compromise or loss, the signature is unique to the individual who owns it; that is, the owner cannot repudiate the signature.

In relatively high-risk transactions, there is always a concern that the user will claim someone else made the transaction. With public key technology, this concern can be mitigated. To claim he did not make the transaction, the user would have to feign loss of the private key. By creating and holding the private key on a smart card or an equivalent device, and by using a biometric mechanism (rather than a PIN or password) as the shared secret between the user and the smart card for unlocking the private key to create a signature, this concern can be mitigated. In other words, combining two or three distinct electronic signature technology approaches in a single implementation can enhance the security of the interaction and lower the potential for fraud to almost zero. Furthermore by establishing clear procedures for a particular implementation of digital signature technology — so that all parties know what the obligations, risks, and consequences are — agencies can also strengthen the effectiveness of a digital signature solution.
The reliability of the digital signature is directly proportional to the degree of confidence one has in the link between the owner’s identity and the digital certificate, how well the owner has protected the private key from compromise or loss, and the cryptographic strength of the methodology used to generate the public-private key pair. The cryptographic strength is affected by key length and by the characteristics of the algorithm used to encrypt the information.

**Digital Signature**

Electronic signatures underlie most ERA activities at this time. What is a signature? Simply stated a “digital signature” is a method to package all the bits and bytes in an “encrypted” form for subsequent use by a third party. To encrypt data, the bits and bytes are sent to a mathematical formula, which turns readable text into, what appears as, random characters. Only the intended party is able to unscramble, or decrypt, this information. The mathematic formula uses a “key” to start this process. Often this key is stored by software and is accessed by the user typing his/her password. The digital signature ensures that only the intended receiver can “decode” (“unencrypt”) the data and that the data was not altered in transmission. The term “nonrepudiation” is used often when talking about digital signatures. With a true digital signature, the PI could not argue that the science was altered. The PI would not be able to say, “I didn’t write that” or “That is not the text of the proposal that I sent.” This is very important in the event that falsifications of data or plagiarism charges are filed.

The digital signature proves that the science was encrypted and was not altered during transmission and, most importantly, that the originator of the data was the “signer” of the digital file. While digital signature technology has been around for several years, the technology associated with its use has a large learning curve. Additionally, there are different algorithms used to generate digital signatures and not all are compatible. The GPEA offers two options and guidance on electronic signatures, both of which are discussed in Figure 905.4-3.

¶905.6 Other Data-Sharing Opportunities

**iEdison**

Interagency Edison (iEdison) has been designed, developed, and implemented to enable organizations to directly input their invention data as well as update information in real time on a fully interactive basis. According to the iEdison Web site (www.iedison.gov):

**iEdison Web site**

New provisions to the Code of Federal Regulations (CFR) came with the enactment of the Bayh-Dole Act of 1980. These provisions stipulated the need for all grantees or contractors to report on activities involving the disposition of certain intellectual property rights that result from federally funded research (37 CFR Part 401). With the growing emphasis that is being placed on technology transfer, it is now common for universities and research organizations to have offices devoted to trans-
fer of research results to the commercial sector, in addition to fulfilling government-reporting requirements contained in 37 CFR Part 401.14.

A Web-based front end is provided for data input. For larger organizations with high numbers of inventions to report, iEdison allows organizations to submit information in a plain, ASCII text file. iEdison does not make use of Web services for the exchange of information.

**eSRS (SF-294/SF-295 Reports)**

The Integrated Acquisition Environment (IAE) initiative will create a secure business environment that facilitates and supports cost-effective acquisition of goods and services by federal agencies, while eliminating inefficiencies in the current acquisition environment.

A number of agency partners collaborated to develop the next generation of tools to collect subcontracting accomplishments. This government-wide tool is known as the “eSRS.” This Internet-based tool will streamline the process of reporting on subcontracting plans and provide agencies with access to analytical data on subcontracting performance.

Specifically the eSRS eliminates the need for paper submissions and processing of the SF-294, Individual Subcontracting Report, and SF-295, Summary Subcontracting Report, and replaces paper with an easy-to-use electronic process to collect the data. With the first generation of eSRS, contractors and their business associates will report data through the Web browser of choice, visiting this site and logging on to report accomplishments using an easy data-entry process. Future plans for the full operational capability include the development of a back-office interface for those businesses collecting accomplishments electronically. Like iEdison, plans are being made to allow for system-to-system transmissions from university accounting systems into government-wide eSRS system.

**Items to Watch**

**DATA Act**

The Digital Accountability and Transparency Act was signed into law in May 2014. This act expands FFATA and moves to provide consistent spending data for all federal agencies via USASpending.gov. It requires common standards for financial data, and more data elements, which will impact institutions of higher education. The goals are to produce consistent and comparable data, reduce fraud, waste and abuse, and streamline reporting.

**SciENcv**

The Science Experts Network and Curriculum Vitae (SciENcv) is a researcher profile system built to assist researchers in completing the biosketch information required in federal applications. SciENcv gathers information from a variety of sources to build profile information, including education, employment, expertise, and scholarly works. As of this writing, SciENcv is in a testing phase for both the NIH and
NSF biosketches. Researchers can use the tool to generate this information in the appropriate federal format for the two agencies, and can store multiple biosketches to tailor the information for various applications.


**ORCID**

The Open Researcher and Contributor ID (ORCID) is an effort to provide a persistent identifier for individual researchers. This ID can follow the researcher throughout their career to reduce the name ambiguity problem in scholarly works. ORCID links with SciENcv and many other profile systems to create a link to the researcher’s works.

http://orcid.org

**Conclusion**

What does the future hold for ERA and the research enterprise? Any researcher, their staff, university central administrators, and colleagues at the funding agency will access various research administrative transactions from many different kinds of computing devices. PIs will learn about funding opportunities that seamlessly transfer information to a grant proposal. The proposal then will be electronically submitted to the potential funding agency. Compliance issues will be automatically sent to the appropriate individuals. The funding agencies will receive the proposal, which will be automatically inserted into their management systems and routed to the reviewers. Successful proposals will be sent to the recipient organization where the award data will be automatically inserted into the institution’s award management and financial accounting systems. All reporting and post-award activities will be done electronically. Many of these transactions are just on the horizon.

To be successful in the full range of business transactions required for ERA, OMB, Grants.gov, and the federal agencies must improve interagency and intergovernmental coordination, including consultation with the public and grant recipient representatives.

When implementing a new ERA system intended to interact with Grants.gov, the new system will be overwhelming at first. Given the complexities that arise from a university’s vast portfolio of sponsors, these ERA systems must be able to handle a variety of complex agency-specific requirements. Not every system will be able to handle 100 percent of the proposals that leave a given university. The idea is to use ERA for routine proposals so that the administrators can use the time saved from routine proposals for more complex tasks and services associated with uncommon proposals. Over time, and with proper feedback from the user community, the ERA system should provide substantial benefits to all users involved in the proposal process.

ERA is mainstream at almost every organization. As with any change, acceptance is a long process. Organizations need the buy-in from senior level officials that must make the commitment to move forward with any ERA system. It is not quick. It is not easy. But it is well worth the investment and it is essential, as it will position any organization with the tools needed to interact with the changing landscape of federal funding.
This section includes expanded coverage of topics relating to electronic research administration (ERA). These materials are culled from a variety of authoritative sources.

**The Council on Financial Assistance Reform (COFAR)**

The Council on Financial Assistance Reform (COFAR) was formed by the Office of Management and Budget in 2011, and is an interagency group of Executive Branch officials who have the charge of coordinating financial assistance activities. The COFAR replaces both the Grants Policy Council (GPC) and Grants Executive Board (GEB), which previously managed activities for the Federal Grants Streamlining Initiative. The GPC and GEB were formed in response to P.L. 106-107.

**Uniform Guidance**

The COFAR continues the goals of streamlining and simplifying federal financial assistance processes, improve standardization and transparency, and provide outreach to gather community input on federal financial assistance processes. As part of the effort to increase efficiencies and reduce waste, the OMB published significant reform to the eight circulars that apply to financial assistance: A-21, A-50, A-87, A-89, A-102, A-110, A-122, and A-133. This reform is known as “Uniform Guidance,” and effectively replaces the eight circulars to provide single guidance for administrative requirements, cost principles, and audit requirements for federal awards. The Uniform Guidance was published on December 26, 2013.

**Digital Accountability and Transparency Act (DATA)**

Federal spending transparency is a priority of the COFAR. The DATA Act, signed in May 2014, places additional focus on this goal. This act is meant to make information on federal expenditures more easily accessible and transparent. It requires common, expanded standards for financial data provided by federal agencies that is subsequently reported on USASpending.gov. The DATA Act expands the goals and purpose of the Federal Funding Accountability and Transparency Act (FFATA).

Both Uniform Guidance and the DATA Act have implication for the collection of data elements in institutional ERA systems.

**The Integrated Award Environment (IAE)**

The Integrated Award Environment (IAE) is managed by the General Services Administration (GSA). Information on this initiative is at: http://www.gsa.gov/
The IAE combines ten federal information technology systems related to searching, applying, and tracking federal awards. It also includes SAM registration and the Federal Service Desk. The systems under the IAE are:

- Catalog of Federal Domestic Assistance (CFDA)
- Contractor Performance Assessment Reporting System (CPARS)
- Electronic Subcontracting Reporting System (eSRS)
- Federal Awardee Performance and Integrity Information System (FAPIIS)
- Federal Business Opportunities (FedBizOpps)
- Federal Funding Accountability and Transparency Act Subaward Reporting System (FSRS)
- Federal Procurement Data System (FPDS)
- Past Performance Information Retrieval System (PPIRS)
- System for Award Management (SAM)
- Wage Determination Online (WDOL)

920.3 Science Experts Network and Curriculum Vitae (SciENcv)
SciENcv is a web-based system that helps researchers assemble biographical information that is required for federal funding applications. Researchers can use SciENcv to create and maintain biosketches to submit with grant applications and progress reports. As of this writing, SciENcv is in testing with both the NIH and NSF biosketch formats.

SciENcv began as a pilot for the Federal Demonstration Partnership (FDP). In collaboration with the FDP and its members, SciENcv was built and is maintained by the National Center for Biotechnology Information (NCBI) at the NIH. The interagency working group convened to work on this issue includes the Department of Defense, the Department of Energy, the Environmental Protection Agency, the National Institutes of Health, the National Science Foundation, the Smithsonian, and the US Department of Agriculture.

IT Solutions for Sponsored Research Administration: Colorado State University as a Case Study for a Collaborative Approach to Implementing a Research Management System

Ron Splittgerber, Colorado State University

Introduction

Beginning with the “eRA I” in 1996, NCURA offered a series of six conferences focusing on developing and sharing information technology (IT) solutions to support research administration. Few commercial vendors offered solutions able to conform to the varied business practices at diverse institutions that make up the higher education community. Collaboration at the NCURA eRA conferences encouraged many participants to develop software applications specifically tailored to existing business rules for their own organizations. In many cases, these efforts simply moved paper workflow to some form of electronic routing without the benefit of a process analysis to take advantage of potential efficiencies when replacing paper processes. Few projects were disciplined enough to create a requirements document to define boundaries, examine current business practices, or identify specific costs.

Phillip J. Goldstein, an ECAR Fellow at the EDUCAUSE Center for Applied Research and President of Philip J. Goldstein & Associates, examined the issue. In a paper titled “IT Collaboration: A Preview of Findings from the 2007 ECAR Study,” Goldstein identified three benefits of collaboration. Those benefits included speed of adaptation, quality of service and reduction of cost. The Goldstein study found that large, multi-campus environments tend to accept the benefits of collaboration, while smaller and private institutions are identified as “non-collaborators.” (Approximately one-third of the institutions surveyed were identified as “noncollaborators” and two-thirds as participating in “limited to extensive” collaboration in IT projects with other institutions.)

While information from the Goldstein study is not final and details unavailable to compare fully with the membership of NCURA, the preliminary findings clearly show the strength of collaboration as a viable alternative to vended products. Considerations of both options may be useful as we lead or are involved in efforts to develop and rollout IT solutions to support research administration at our campuses. This article focuses on one such exercise at Colorado State University.

The Dilemma

Collaboration encouraged by the NCURA eRA conferences gave birth to countless software applications designed to move paper-based processes to those using electronic resources. Many of the “home-spun” applications developed in the 1990’s are not institutionalized in the sense that support from the university central IT group is

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2 Ron Splittgerber also serves on the Executive Board and as co-chair of the ERA Committee of the Federal Demonstration Partnership.
required or that sustainability is a consideration should lack of local resources force constraints. The advent of electronic submissions using FastLane, followed by NIH Commons and later Grants.gov created another layer of complexity for these home-spun implementations.

Certainly many organizations face the problem of scaling the software to meet the challenges of managing a portfolio of grants and contracts expending millions of dollars annually. Large commercial vendors are able to re-factor both financial management and human resource services applications designed for industry solutions to marginally meet the needs of higher education, as long as the institution is willing to bend existing business rules. Few of these commercial vendors focus specifically on the needs of research management for the same customers. All of these factors encourage and sustain the ‘home-spun’ and locally developed applications that have emerged over the past 15 years, many originating as a result of collaboration during the six NCURA eRA conferences.

**Other Institution’s Challenges**

Colorado State University (CSU) uses a series of home-spun applications developed over the past two decades centered on the “cradle-to-grave” responsibilities of grants and contract management under the Vice President for Research. According to the National Science Foundation’s “R&D Survey,” the university’s expenditures for federally financed R&D in 2006 was $182.7 million, ranking the institution 31st among U.S. state-financed, public universities. The university’s Office of Sponsored Programs manages about 1,900 new awards annually.

Research Services is a separate IT unit at CSU which reports to the Vice President for Research. The department’s mission is to “provide innovative services for the research community that will enable and assist their research, instruction and diversity.” The department focuses on the following responsibilities:

- **Help Desk** supporting the 2,000 research faculty and staff, as well as division staff reporting to the Vice President for Research
- **Network infrastructure** in collaboration with central IT: managing cabling, switches, firewalls for the research division
- **Network resources**: hardware and software associated with authentication, domain services, file services, Oracle data services, Citrix resources and Windows Forest & Domain services
- **Application resources**: Microsoft Exchange, desk top, mobile - OWA (Outlook Web Access)
- **Software development & support**
- **ASP (Application Service Provider) support**: Topaz GRANITE, ProIRB, Key Systems eProtocol
- **Licensing and desktop security**: Microsoft Active Directory support
- **Web services**: research branding and web development
Portal services: research tab and channels on university RamPoint portal

Research Services staff at CSU attended all six of the NCURA eRA conferences, creating and sharing many ‘home spun’ applications from these meetings. The applications are tightly coupled to a 20-year-old accounting system that is no longer supported by the vendor and that is run on a mainframe computer — also long past normal life expectancy. The home-spun applications named PASS (Proposal Award Support System) support research management from cradle to grave and include:

- Pre-proposal information and routing: The system’s Web applications collect limited data to determine if routing should include the Development Office to assure recent guidelines are available and to enable proactive contact for proposal development.

- Proposal development, submission and routing: Web applications enable staff to gather research and compliance approval forms and provides tools to create and upload budget templates and route these items for appropriate approvals.

- Award Information: Based on sponsor award notice, the system is able to gather additional information and create necessary accounts in the financial management system.

- Award life-cycle (amendments etc.): The system enables staff to collect and distribute changes to award such as budget modifications, date changes, compliance information.

- Financial reporting: The system generates reporting for faculty and staff as well as required financial reports to sponsor.

- Sponsor billing, ledgers and invoicing: System creates and generates necessary billing information, track draws, accumulate information on typical 30-60-90 day invoice information, past due accounts, etc.

- Technical reporting and closeout: Based on award notice requirements, system enables staff to notify appropriate contacts when technical and scientific reports are due and track appropriate closeout action items.

In 2004 the university made a decision to replace its accounting system. Given the existing integration with the home-spun research management applications, the Vice President for Research made a strategic decision to link replacement of the accounting system with a search for an application suite to manage the university research portfolio. There were a number of factors supporting this decision. It was clear that replacement of the accounting system would require a complete re-write of most all home-spun software. Additionally, the existing software would not scale to support the increase in volume ($152 million in FY2001 to an estimated $350 million in FY2008) or “system-to-system” submission to Grants.gov. There were also resource limits for Research Services IT staff to meet an aggressive timeline for a new accounting system. From a budget standpoint, it was anticipated that a request specifically for research management software would not have sufficient campus support on its own.
The Survey
With the decision to link the future of research management to a new accounting system, determining the requirements for a new research management system seemed the first logical step. An online web survey instrument provided separate question sets for the accounting and research requirements with the capability of generating an RFP based on the responses from the campus community. The research portion of the survey found a series of gaps in the existing home-spun applications. These gaps included compliance support to allow web creation and submission of protocol applications. There was also concern about tracking future commitments with respect to dollars, facilities and related central, college and department resources, as well as college/departmental reporting related to faculty investment and return. Responses to the survey revealed concern about future years’ budgets, time-and-effort reporting, tech transfer and export control.

From a faculty perspective, the survey provided useful information for research management. Respondents indicated a need to capture proposal information at inception; provide proactive contact for submission guidelines; eliminate duplicate data entry; provide single point-of-entry and sign-on for all modules; and the desire not to decrease existing functionality with a new research management system.

Financial Management System Discovery
Even though the university strategically combined the financial and research management projects, two separate teams were enlisted. A parallel discovery process ensued, with one team looking at vendors for the financial system and another for the research system. The financial system team anticipated the vendor list based on interviews with other institutions going through the same process. Vendors that popped up on the list included Oracle, PeopleSoft, SCT Banner, and SAP.

Research Management System Discovery
With requirements in hand, the team decided that the next step in the process should include an examination of how other institutions were meeting the need for research management. Phone interviews indicated that universities such as UCLA, Johns Hopkins, Hawaii, Pittsburg, and Illinois leaned toward a commercial system, InfoEd. On the other hand, MIT, Penn State, Princeton, Duke, and Baylor utilized Coeus, a system developed at MIT. The team also found several other vendors whose products were being utilized, including InfoEd, Universal Data, the Banner Grants Module, Webridge (by Click Commerce), GAMS, Grantslam (from Cayuse), RAMS, IT Works, and eProtocol Key Systems.

Each vendor provided a demonstration of their product and responded to the requirements document through a web interface. Based on the discovery process, it was estimated that a new system would cost approximately $1.2 million, which would include software licensing; installation, consulting and training; hardware; and back-fill staff to support legacy systems. An additional $185,000 was added to the cost estimate for annual maintenance.
Release of the RFP (Almost)

After nearly two years of effort, the RFP document from the purchasing department was ready for release. A single RFP allowing different vendors for the financial and research management systems was constructed and routed for final review. However, a few days before the release of the RFP, one of the key sponsors, the Vice President for Finance, resigned. Without endorsement from this sponsor, the RFP was dead.

Both teams expressed concern that the campus-wide effort covering several years appeared in jeopardy. Yet that concern seemed to be balanced by findings in the discovery processes, especially the one focused on the financial management system. The interviews with other institutions completing their search indicated that many were facing delays, unmet requirements, and over-budget estimates as systems are evaluated. Other institutions in the implementation phase of projects also experienced problems when vendor sales meetings seemed to promise more than the actual application delivered. Did the setback signal an appalling end to a long, tedious discovery process? An indication of the mood at the time became evident when a team member quipped, “Perhaps we prevented the university from committing resources to a quest doomed from the start.”

New Direction

During the search for a new vice president for finance, both teams considered other options. Several members of the review team found another potential solution from Kuali. This community source development software offers integrated solutions for both the financial and research management needs — Kuali Financial System (KFS) and Kuali Research Administration (KRA).

Once again, the teams spent another year moving through the approval process, focusing on issues such as The Board of Governors’ interest in a single solution for all campuses and an administration directive to implement a new system with a two-year timeline. In addition, the teams discovered that KFS financials had yet to be installed in a large, research institution and KRA was just starting development based on Coeus functionality. It was not a finished product with “tires to kick”.

Lessons Learned

There are lessons to be learned in every venture, including those which do not meet intended objectives. Such is the case with our efforts at Colorado State. So, we offer the following observations.

Remember to obtain the support of key administrators early in the process, including those from the finance division. If the university uses a strategic plan that impacts the budget and software acquisitions, work with others for inclusion of a research management system. Consider a parallel software project with a new financial management system if the university is considering a replacement. Often it is difficult to gain sufficient support outside main systems — finance, student and human resource. Linking a research management system to one of the ‘big three’ may increase the likelihood of approval and funding.

Once approval has been obtained, use a focused survey, meetings and interviews to
determine requirements for your system, as well as to determine any gaps in your current system. Engage the campus in a discovery process using central, college and department stakeholders. Consider both vendor and community source solutions in the discovery process. Construct a requirements document based on information gathered from the survey and discovery process that describes a complete system.

One tool that may prove useful is a Wiki. The Wiki can be used as a focus of project design and management to assist formulation of requirements, construct documentation and conduct surveys. Anyone can contribute to the content, and versions of the information are tracked over time, easing documentation of change in a requirements document.

Collaboration involving institutions with similar business management requirements focused on managing an individual research mission is an effective resource. Given the latitude to determine gaps in existing management strategies through the use of interviews and surveys, the university IT staff has the tools to construct a requirements document able to guide efforts toward more effective software applications impacting research management. However, the construction of any such document and assessment effort must be done in concert with research administration.

References

Figure 920.4-1. The Requirements Document

What is a requirements document? Certainly some of the team argued that the effort required to create the document was beyond the scope of their responsibility. After all, what would you do with a requirements document if one suddenly appeared on your desk? So the team first asked, “What is a requirements document?” It is:

◆ Written statement of what the application will do
◆ Basis for agreement between the team and those who will use the application
◆ Resource for team developers as well those implementing the application
◆ Means of estimating effort and establishing a timeline
◆ Serves as basis for the project plan
◆ Guideline for Quality Assurance Testing

Second, the team wondered “Can we do without a formal requirements document?” Perhaps, but only if a single developer is involved, one small workgroup will be using the application, there is a common understanding of what the application will do without a written list, and it takes less than a calendar month from idea to production. Clearly the team would need a requirements document! The plan would be to use the document as a reference for the following:
**Project Leader**
- Determine Scope
- Split into phases or modules as needed
- Help collaborate timeline with sponsors, managers System Analysts
- Document the business requirements
- Develop written documentation
- Organize QA (Quality Assurance) testing
- Establish integration with legacy systems
- Create maintenance requirements

**Project Managers**
- Understand the phases or modules
- Coordinate integration with other applications
- Track development progress

**Project Sponsors**
- Help overall motivation for project
- Sign off on various phases or modules
- Confirm that requirements reflect business processes

When constructing a requirements document, the team found the following hints may to be of value:
- Verify requirements by meeting with users with different points of view
- Write simply
- Use short sentences, ample paragraphs, and bulleted lists
- Write in active voice “The application will list all investigators,” rather than “The investigators will be listed by the application”
- Illustrate points with charts and tables when possible
- Avoid acronyms or jargon
- Include a glossary to define acronyms you must use
- Partition requirements into separate documents for various modules (Proposal, Award, Compliance, etc.)

Many templates are available to guide a team through the construction of a requirements document. If none of the team members have experience designing such a document, sage advice might be to pick a complete outline then drop topics not appropriate for the project at hand.
John Caruso, Oregon Health & Science University and Naomi Schrag, Columbia University

Ah, Effort Reporting! It’s been a fact of life in research administration since the days when we did everything on paper (before computers!), and no matter how automated we become effort is not going away any time soon. But the current question facing many research administrators as they drag their feet reluctantly into the 21st century is this: Will the transition to an electronic system for effort reporting and certification make things any easier or will it just compound our headaches?

Well, we’re glad you asked. We might not have all the answers for you, but we have a number of handy suggestions that can help you navigate a few roadblocks and avoid some common pitfalls as you begin your journey down the road to electronic effort reporting.

However, if your institution is still clinging to the ancient comforts of paper effort certifications, you’re well aware of the challenges already presented by the creation, distribution and collection of said documents. Sadly, we can’t tell you that you’ll experience complete relief on this front. Yes, there will be fewer stacks of paper and the birdies in the forest will have a few more trees to perch on while they sing their songs. But you’ll still be back in your office dealing with many of the same issues.

As we see it, here are the core issues you’ll need to consider long and hard before deciding which electronic option is best for you:

Data. Where do you get the information used to populate your effort statements? Where does data go in and how does it come out? Does it come from multiple sources and maybe even from multiple systems? Who has access to this information apart from what is shown in the effort statements? What if changes in allocations need to be made before the statement is certified? While you’re revisiting this topic, it may also be worthwhile to reconsider some of the things you’ve been taking for granted for a while, like why you’ve chosen the effort period you have (monthly, quarterly, etc.).

Distribution. Once they are created, how are effort statements distributed? Who maintains oversight of the full effort reporting process? Who assists with this process at the department level? How are they trained? How are effort statements presented to those being asked to verify and sign them? Is there effort certification training (whether optional or mandatory) for faculty, or are department administrative staff queued to provide assistance at this level? And again, keep going back to your fundamental decisions, like who signs effort certifications — does the PI sign for everyone on the project or do individuals sign for themselves?

And a new question as you go electronic — do you need institutional policies

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3 This article is reprinted from the NCURA Magazine, Vol. XL, No. 5, December 2008/January 2009, published by the National Council of University Research Administrators. It is used with permission of the publisher.
regarding electronic signatures?

**Collection.** How are effort statements collected? And once collected, how are they reviewed, logged, and stored? How are returned (and outstanding) effort statements tracked? What is the procedure if statements are not returned in a timely manner? How many times do you remind folks and who do you escalate to when you face compliance challenges? And do you have the reporting capability you need in your electronic system to track compliance across your institution?

**Communication.** Like any new initiative, implementing an electronic effort reporting system may require a communication campaign to let people know that change is coming and to explain what’s in it for them. Of course, at many of our decentralized institutions making sure you reach the right audience can be a challenge in and of itself, especially since in all likelihood you have to reach many different audiences. The key questions here are: who do you need to reach? Departmental administrators? PIs? All researchers? Deans? Chairs? Which channels of communication best reach these audiences? Who do they listen to? What do they need to know? When do they need to know it? How often should you communicate? And when you really need to get their attention, what’s the best way? No single way will reach everyone, so you may need to think about putting together some sort of communication variety pack. For a large implementation plan, developing a communications calendar early in the process, and drafting communications up front, will save a lot of time and headache when you are under the gun.

Yes, many of the questions in these categories may be the same basic questions you (or the someone who came before you) have always wrestled with in implementing your paper solution, but they’re especially important to revisit now. And you shouldn’t revisit them alone. It’s time to load up the research administration station wagon and take everybody along for the ride. Or, to skip the snappy metaphor, it’s time to form yet another committee. Oh, joy of joys!

But before you book standing meetings in the conference room and round up the usual suspects, remember that the key to putting together a successful work group around this topic is to make sure you’ve got all your key players represented. Yes, you’ll need a central administrative manager or two and some department administrators, including the folks who are actually working where the rubber hits the road. Being the department effort coordinator tends not to be a glory job, so make sure the poor admin assistants who get tasked with pester pester the faculty and really rounding up the statements are in the room when you’re talking process. You’ll also need some tech people there, and probably one from every system that’s likely to be involved. You might as well start with them involved in the conversation, since they’ll need to be involved later anyway. If you can swing it, it’s also a good idea to have a couple faculty members there to provide a reality check. These are the folks being asked to do the certification — they ought to know what’s heading down the pike. And for faculty representation it’s always nice to balance things out by having some fresh faced junior faculty members to go with your curmudgeonly old school researchers.

And finally, make sure you’ve got executive sponsorship. Even if the VP isn’t go-
ing to sit through the nuts and bolts conversations, having that level of the institution dialed into what you’re undertaking will pay dividends later on when you’re trying to roll the thing out to campus. Besides, you’re probably going to need some capital and that means higher level buy-in anyway.

Once you have your group together and work your way through the key issues you’ll be considering for what you need (see the sidebar “Ye Olde Effort Checklist”), you’ll need to decide what your best solution will be for satisfying your system requirements. In its simplest form, this decision boils down to either building your own system or buying one off the shelf. Given adequate institutional resources, a customized system can be a good alternative, though this road-less-traveled is not without its own challenges. The more common approach is to buy a system from one of the vendors offering such things and then either compromising where the system doesn’t meet your initial specs or working in-house (with or without the aid of the vendor) to customize the system. (A number of vendors offer electronic effort reporting systems.)

Fast forward now to that day when you’ve picked your system and started getting it installed. You’ve already thought about how to roll it out to your audience. And you’re beginning to send some of those canned communications your carefully prepared. Maybe you’re even archiving communications onto a dedicated webpage. Now is the time to start turning all those random questions you keep fielding into campus resource gold — a Frequently Asked Questions document. FAQs help by providing one-stop shopping for those struggling with the new system, but they also cut down on one-off phone calls and make sure the answers people are getting are more consistent than they might otherwise be. But don’t forget to run a draft of the FAQ document by your implementation committee, so you can make sure the answers make sense to all manner of potential readers.

Converting to an electronic system for effort reporting has many advantages, and careful planning can help you avoid most pitfalls and many migraines along the way to implementation.

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**Ye Olde Effort Checklist**

- Read Guidance Documents
- Decide Effort Period
- Determine Sources for Effort Statement Data
- Develop Effort Statement Template
- Assign Signature Authority for Statements
- Review and Update Policies and Procedures
- Review Effort Reporting Business Practices
- Prepare Resource Documents
- Train Signers and Coordinators
- Coordinate Distribution/Collection
- Track Distribution/Collection
- Reward Compliance and Address Noncompliance
Electronic Research Administration: The New ‘Town Square’
Sheila Lischwe, Saint Louis University

Introduction

greening: Restoration of vitality or freshness; rejuvenate. —Answers.com

Convenience and cost-savings: These are the benefits that electronic research administration (eRA) promised to deliver, in return for all the bumps and stresses we all suffered through in its adoption over the past decade. At Saint Louis University (SLU), our own internally–crafted electronic research administration system, known simply as “eRS” (electronic Research Services) is proving true to these anticipated benefits, but more importantly, has given back considerably in unexpected ways that are positioning the institution to confidently embark upon the goal of doubling research revenue in the next five years. It has created a new centrality – a “Town Square,” if you will – around which all parties in the research community now gather on a daily basis, in order to transact grant and contract business. Chairs, deans, investigators, support personnel, compliance officers, and collaborators “meet” to work on grants-related tasks. Despite early fears and skepticism, eRS has become part of the SLU lexicon, with people asking, “Should that go up in eRS?” or “Can we have eRS handle this?”

eRS has also allowed more efficient organizational structures to form, fostered cross-departmental collaborations, and most surprisingly of all, transformed the on-campus image of the pre-award office from an isolated, placid administrative backwater to a fast-paced, front-and-center, in-the-know, cutting-edge department. It is in this spirit that eRA truly has restored vitality to research administration at SLU, which this article will attempt to describe.

Electronic Research Administration at Saint Louis University

In preparation for the transition to grants.gov in 2006, SLU determined that it needed a more efficient and dependable means of routing and transmitting the sizeable electronic grants.gov application packages than relying on the institution’s email and internet connection. SLU receives approximately $60 million through grant and contract transactions annually, more than 80 percent of which is generated by our biomedical campus. Additionally, ever-increasing compliance requirements demanded a more systematic way of identifying when IRB, COI, IACUC, or Export Controls are involved in a proposed project.

As such, SLU built a web-based “tool-kit” that would store grant applications and provide for simultaneous internal routing, review, and approval from the investigator to his/her department chair, dean, compliance officials, and the pre-award Office of Research Services. Development and testing occurred throughout 2005 and 2006, and usage was required for proposal review and submission effective July 1,

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2007, replacing the existing paper-based transmittal that required manual signatures obtained in a linear fashion.

Over the last several years, as the basic system has been refined, additional components and functionality have been added:

◆ effort reporting
◆ a keyword selection mechanism that polls the grants.gov FIND database and returns matching funding opportunities to an investigator’s dashboard
◆ a free-text “research interests” field that can be searched to identify other investigators on campus for collaborative purposes
◆ a clinical trial contract review mechanism
◆ functionality to administer the submission, review and management of internal grant programs

The impact of eRS became crystal clear earlier this spring when the Medical Center location of the pre-award Office of Research Services prepared for a move to co-locate with its sister office on the main campus. As we archived all files that were current or had terminated in the last three years, only three shelves of a possible 36 shelves remained. With 1,913 proposals having been submitted since July 1, 2007, and 1,344 awards received during the same time, the substantial savings in paper, reproduction, energy and staff time to administer and maintain became very apparent.

Magnify this by the fact that the same paper file was kept at the investigator, department, and compliance office level, and the impact is even more substantial. When you factor in the equipment and furniture used to house this paper file system, even greater savings are realized. These improvements were expected; what was more astounding, however, were the unanticipated operational/behavioral improvements that eRS made possible, well-positioning SLU to achieve its research goals.

**Enhanced Working Relationships**

**With the Research Community**

Electronic research administration was greeted with great skepticism at SLU, with fears that delegating grantmanship tasks to computers would reduce us to a faceless office with only cursory interactions with investigators and administrative personnel. However, the exact opposite occurred! New systems required new training and new policies, particularly at the Medical School, traditionally an arena steeped in well-defined hierarchies that separated interactions between those who did research and those who administered it.

eRA training sessions provided the opportunity to become a much more visible office on campus and in fact, increased the number of face-to-face contacts we had with our clientele. We delivered six (6) two-hour sessions, during the spring of 2005 at which we introduced the new grants.gov application packages for NIH, as well as the new internal eRS system. The Provost strongly endorsed attendance at the sessions, so we had a captive audience of both administrative personnel and inves-
tigators, with the spotlight on the Office of Research Services (ORS) as the resident experts. This dynamic played an important role in the shift to a more peer-to-peer relationship with investigators: we had gained an important advantage in this relationship – control of information - and the shift of responsibility for grant submission to ORS placed us in a position of authority that we had never before enjoyed. Since then, our office has risen in stature in terms of influence across campus.

Thanks to the complexity of electronic research administration and the labyrinth of policies and additional compliance requirements that has seemed to accompany it, the ORS office is highly regarded as a warehouse of specialized expertise. We are continually asked to present at departmental meetings and to conduct refresher sessions on the use of eRS. Our public persona has grown in prestige and influence, both of which are key to successfully lobbying for additional resources.

**Within the Central Research Office**

eRS has enabled the spawning of new organizational arrangements that allow us to enjoy synergies that improve effectiveness and service to our clientele. The electronic approval routing system in eRS has eliminated the need for manual signature gathering, allowing the biomedical campus office to co-locate with our sister office on the main campus, as well as with the post-award staff. Co-locating has enabled an improved workflow, as departmental assignments were revised so that all six pre-award grant professionals have responsibility for portions of the high-volume medical school/public health areas, formerly only the responsibility of three staff members housed at the medical center, due to the physical location of hard-copy files on the biomedical campus. This has expanded the skillset of all employees, as our main campus staff expanded their knowledge of new sponsors and systems (NIH and the disease-related associations – AHA, ADA, etc.).

While those biomedical sponsors were formerly assigned exclusively to medical school departments, all employees are now gaining skills in budget development and funding source identification with assignments to lesser volume arts and sciences departments that do not enjoy the same type of administrative support as well-funded School of Medicine departments. The peer-to-peer teaching within the ORS has been a positive byproduct for this young office, providing opportunities to develop presentation skills and team collaboration as never before available.

**New Organizational Structures**

Adding the contract review function for clinical trials allowed SLU to pursue a much-desired spin-off of the clinical trials contract review function from the pre-award office, to its rightful place in a centralized clinical trials office reporting to the School of Medicine. As a primary function of the medical campus, it made no sense to have moved it to the main campus. eRS made this relocation possible. Data entry was shifted to the department, and the auto-assigned eRS number facilitates communications with investigators and support personnel. Departments can readily login and view the status of their contract and see what issues are being negotiated.

Simultaneous review by all parties eliminates delays and has significantly re-
duced the time to contract execution.

**Challenges & Opportunities**

As we continue to refine eRS, challenges do, indeed, remain, but we also foresee unlimited potential for ways that eRS, and electronic research administration can help facilitate the SLU goal of doubling research in five years.

**Challenges That Remain**

◆ People do not like to give up paper. While several staff members function nearly “paperlessly,” there is still a reliance on hard copy for the majority of staff members, so we continue to tolerate individual reliance on paper with the steady and regular directive to rely on eRS viewing of files as the “greener” solution.

◆ While the focus on eRS has initially been on the pre-award tasks with the exception of effort reporting, our post-award colleagues remain primarily paper-based. Now that we are co-located under one roof, and face-to-face eRS training is more readily available on an ad hoc and formal basis, we will work on moving that office to formal reliance on eRS, which will further enhance processing time for account creation and other post-award financial tasks.

◆ The greatest advantage of eRS and electronic research administration – its accessibility from anywhere, anytime – is perhaps the greatest curse for ORS: expectations that the staff is also readily available 24/7. Policies and work habits need to be made clear and managed to avoid burnout.

**Opportunities**

Perhaps the greatest opportunity that electronic research administration has afforded Saint Louis University and the profession of research administration as a whole is the rise of research development as a sub-specialty, which is key, at least for SLU, in its plan to expand research funding. Electronic research administration has shifted the burden of data entry, compliance tracking, and file management from the central research office, freeing up time for staff to spend more time identifying funding opportunities suitable to the institution’s strategic initiatives and cultivating collaborative groups to respond to these opportunities, which is exactly what the true essence of a pre-award office is.

**Conclusion**

Contrary to early fears that eRA would dilute interactions within the research community, eRS at SLU has enabled the research administration office to provide higher-quality and more frequent face-to-face service than had ever been possible with the former paper-based grants management system. With no reason to be linked geographically to one campus or another, the pre-award staff is now all located in one location, facilitating communication that, comes with hallway conversations.

Also, being co-located with our post-award colleagues, enabled a true “cradle to grave” service now possible, further enhancing our services to investigators and departmental personnel.
The complexity of policies and regulations that spawned these new systems and procedures has ultimately positioned the pre-award office as a trusted, respected center of expertise on campus. Finally, with the workflow improvements that emerged as a result of eRS’s adoption, we can now pursue more proactive research development activities which will be key to growing research. eRS has allowed us to become an enabler for research, which should be the true essence of a pre-award office. Most town squares pay tribute to citizens whose contributions form the foundation of that locality – in the research “town square” at SLU, that monument would be eRS.

About the Author

Sheila Lischwe is the Director of the Office of Research Services at Saint Louis University, where she oversees a staff of seven grants professionals in the management of pre-award activities for SLU’s main and biomedical campuses. Dr. Lischwe received her Ph.D. in higher education administration and an M.A. in Urban Affairs from SLU, and an MBA from Southern Illinois University at Edwardsville. She has previously worked in research administration and development at Webster University in St. Louis, Missouri and Southern Illinois University at Edwardsville, in Edwardsville, Illinois.
Choosing the Best Electronic Research Administration (ERA) System for Your Organization

Hope C. Grant, Clark Atlanta University

As organizational trends continue to move towards paperless environments and process efficiency, research entities are becoming more focused on automated procedures for the various aspects of research and sponsored programs management. This prominent issue has shifted quickly to the forefront as organizations jostle to reposition themselves as leaders in the research realm by eliminating redundant and antiquated approaches to managing and tracking project proposals and awards. Thus, we witness the ascension of electronic research administrative (ERA) solutions for organizational functions that support these sponsored programs. These emerging ERA companies promise one-stop shopping for all occupational areas of program management, providing hope for the intricate and sensitive aspects of research administration that outsiders rarely comprehend. The question surfaces: Which ERA system is best for our organization? The answer is not simple, though in research administration we find it never is.

It is easy to become overwhelmed with the many ERA systems available offering easy solutions to your program management dilemmas. However, there is a logical method to distinguish between the perceived and actual benefits that an ERA system can provide an organization. The process of determining an ERA system begins long before you contact any provider. In this article you will find best practices in determining which ERA system is best for your organization.

Analyze the Current Research Administration Process

Most institutions already have policies and procedures in place for tracking proposals and awards. The first step is to define the current processes and determine which successful aspects will remain and which new components will need to be added, not just in terms of the ERA software but regarding the general procedures as well. Assess what strengths and weaknesses the organization has and establish the capabilities that the ERA software should present to support the organization needs. Bear in mind not only where your organization is now but where it needs to be in the short-term and where it is going in the long-term. It is important to envision what the organization wants to accomplish through the ERA system and how it will incorporate future development.

Examine Each Functional Area of Organization Process

Many ERA Software providers began with a particular module as a resolution for certain issues. From there it grows into a fully functional ERA system for all program management areas. However, while they may specialize in a particular area such as Human Subjects or Proposal Submission, the appending modules may not be the best solution for your organization.

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Therefore, we should address all areas and find out what will work best for each area of your organization. You may have to combine modules from different vendors to deliver the best possible solution for the organization’s electronic research administration needs. These functional areas include Pre-Award, Post Award, Compliance, etc.

**Research all Alternatives**

After you have examined your organization and developed internal measures, it is now time to look to outside sources for information that will aid in selecting the best ERA System. Consult with your colleagues at other organizations. Find out what software people are using and what they are saying about the software. It is important to understand that what may work for one organization may not be the best for others, and vice versa. However, you do want to gather feedback from current users to evaluate whether the ERA solution will be mesh well with your organization’s functional environment. Additionally, utilize online resources to develop a comparative schedule evaluating the pros and cons of each potential ERA solution. This will undeniably serve as a valuable tool in your final decision.

**Involve All Stakeholders**

While the ERA system is primarily designated for research administration there are others who will be affected by it. This includes the faculty, staff and administration within the organization. The faculty will have to be familiar with the new methods and how it will affect them. The administration will need to know how these costs will benefit the organization and produce effectiveness in sponsored programs management. The support staff outside of the sponsored program office must buy into the new system because interdepartmental procedures will change and valuable training should be made available to them. As a result, it is only sensible to include faculty and department administrators in the decision making process, gathering input from all parties and addressing current technical issues that they may face and how the new ERA system can be an improvement for them as well. While everyone may not be satisfied with the overall outcomes, the act of allocating time to receive feedback from all parties will build rapport and garner support for the final product.

**Guarantee Technical Integration**

The ERA solution should ultimately align with current processes without requiring major changes in previously efficient procedures. There are many other phases to program implementation outside of the actual installation of the ERA software. You also have to consider data migration, current resources available for integration as well as the other functional areas. Many organizations employ a number of technical platforms across the entire organization for supportive services such as human resources, payroll, financial management, and information technology and student records. The ERA System chosen will interrelate with all of these areas in some way so it is imperative that these can be integrated with ease and accuracy.
Consider and Prepare for Total Cost

Implementation of any new software can be extensive and expensive. Not only will you have to pay for the software itself but many times an organization’s Information Technology Department may not be equipped to handle the installation itself so you may have to rely on the software provider for additional support that was not included in the regular schedule of fees. Additionally, these ERA systems are very large and process so much data that it is possible that the current hardware will also need to be upgraded to support the amount of information use. These systems are frequently upgraded and there may be modifications needed to assure full functionality and the optimal operation, which generally affix additional costs. Often times there are recurring expenses such as annual subscription and software maintenance fees as well. Usually, these systems are sold as package deals which include a fixed amount of support and training. So if there is additional training or support needed these will drive the implementation costs up as well. Finally, consider the human resources needed to execute the system installation. Utilizing the research administration team for the implementation project may cause the daily routine operations to become secondary tasks. How much employee time will you have to dedicate to this project? Will there be a need to bring in temporary support staff to maintain the standard level of operation? Contemplate all of these hidden costs and bring them to the forefront in negotiations with the team and software provider.

Plan for Implementation

Seldom do implementation projects go according to plan. Ultimately, these projects will take more time and money than originally intended. Consequently, it is important to develop a sensible plan and timeline for execution. While it is expected that Murphy’s Law will affect all events, it is advantageous to anticipate roadblocks and consider possible obstacles that will prevent a smooth transition. Failure to do so will indubitably result in extended timelines, increased frustrations and higher costs.

Recognize Probable Benefits

During the sales pitch the software representative will probably provide some statistics regarding the benefits of purchasing their ERA system. However there are additional benefits within your department that they may overlook. It is advised that goal setting be completed to forecast concealed benefits and develop a vision. A simple way to do this is by incorporating the SMART Technique: Specific Measurable Attainable Realistic and Timely goals for the program. If several of these goals cannot be achieved with the prospective ERA System then it is possible that it is not the right solution for your organization.

Remain Open Minded

Throughout the process the team and all stakeholders should remain flexible there are goals that need to be achieved but it may not be done in the manner or timeframe that was originally proposed. But this does not mean that it is not the best solution. As stated in Step 2, a combination of modules from different providers may be the best fit for the objectives set out. You are not required to obtain all systems for
each function from one provider. At times it may be best to keep certain technical features in place that have been proven in the past within your organization. Also, it is not always beneficial to go with the first provider that contacts you or the one that is most popular. There will be deviations from the original path but the detours maybe well worth it.

**Aftermath**
Lastly, as your organization continues to grow, so should the capabilities of the ERA system. The system chosen should sustain itself with new compliance requirements and improved technology. Additionally, incessant training and support is needed to address turnover, process improvements and technological innovations.

**References**

**About the Author**
Hope C. Grant is a Research Administrator at Clark Atlanta University. Hope has seven years of experience in research administration including pre award, post award and financial compliance. She has been fundamental in electronic research administration matters throughout her career supervising data conversions, system modifications, process assessments as well as training end users. Additionally, Hope’s is interested in policy development and process improvement. Her current responsibilities include electronic documentation and data management, preaward services, proposal development and organizational strategic planning.
Faculty Profiles and the Federal Demonstration (FDP) SciENcv Pilot

Lori Ann M. Schultz, University of Arizona and Ron Splittgerber, Colorado State University

Faculty Profiles. We all understand the importance of maintaining a current résumé, curriculum vitae, or faculty profile. We see them every day in grant applications and progress reports, evaluate them to hire new staff, and use them to advance our careers. We add new information to our own résumés when we change jobs, publish research results, earn advanced degrees, present at professional organizations, and take on new responsibilities. A lot can happen in one year, so imagine when that year becomes ten, or twenty, or forty years. The work to maintain accomplishments over a decades-long research career is significant. Faculty Profiles are constantly changing because they include all of the biographical information related to a faculty member’s career and professional achievements, including employment and educational history, collaborators and students, publication citations, patents, presentations, grant activity, and more.

Managing this information is both a burden and an opportunity. The administrative burden in maintaining and reporting profile information is clear: profile information is not kept in one place. It exists across multiple systems at universities, research institutions, and federal granting agencies. As a result, there is substantial effort required to assure each location contains accurate and up-to-date data, and resulting duplication of effort associated with keeping data up-to-date over multiple platforms and providing it in multiple formats.

Faculty and institutions struggle with multiple profiles and authentication mechanisms. The data are not consistent, and there is little perceived incentive to maintaining and updating the data. Yet profiles can also provide an opportunity to promote a scientist’s career. A well-advertised profile can serve as a vehicle for enabling discovery about researcher expertise and professional accomplishments. As such, it can provide a voice for researchers to document the results of the grants they have received and for agencies to describe the impact of their science investments.

In her July 2011 Rock Talk blog, Dr. Sally Rockey (Deputy Director of Extramural Research at the National Institutes of Health [NIH]) introduced the kick off of a federal-wide research profiles project. The Research Business Models interagency working group, the Science of Science Policy Working Group, and the Federal Demonstration Partnership (FDP) are working together to initiate a pilot of a federal-wide profile system (Rockey, 2011). The system is called SciENcv – the Science Experts Network Curriculum Vitae. The FDP pilot of SciENcv will capture information from existing systems to demonstrate how typical researcher tasks such

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as completing a biosketch could be accomplished from a connected system (Lane, Schaffer & Schultz, 2012).

In 2005, the Federal Demonstration Partnership (FDP), a collaborative initiative among 10 federal agencies and 119 institutional federal award recipients, funded the Faculty Burden Survey. This survey measures administrative burden on faculty research investigators conducting federally funded grant work and is often referenced when we talk about changing regulations, accounting standards, the demands of compliance activities, and their impact on a faculty member’s ability to devote time to federally funded research (Decker, Wimsatt, Trice & Konstan, 2007).

Rockwell (2009) shows that 42% of federal research time is devoted to pre/post-award administrative activities. Progress-report submissions are listed as one of the top research-related burdens (Rockwell, 2009). While progress report formats are different across funding agencies, they have in common a requirement for biographical information for the Principal Investigator and key personnel, such as contact information, employment and educational history, and publication citations.

Before the 2005 workload survey and 2007 report, the FDP recognized that standardizing an investigator’s profile, including curriculum vitae, would create efficiencies for both the faculty member and federal agencies, if the profile is based on a common template and standard components. In 1995, the FDP initiated the Electronic Grants Business Forum with that goal in mind. The FDP SciENcv pilot builds from that early work of identifying data elements common to an individual’s profile. In August 2011, the FDP Executive Committee, in collaboration with five federal agencies, approved a demonstration (pilot) to begin work on a centralized common profile system, which has the potential to reduce faculty burden by:

◆ Importing data from existing systems,
◆ Reducing duplication of effort for the association of personal information with applications for grants and contracts from multiple agencies,
◆ Generating agency-specific formats for common items like biosketches and current & pending support, and
◆ Auto-populating applications and progress report forms.

The federal agencies are responding to administration mandates. The White House Office of Management and Budget (OMB) and Office of Science and Technology Policy (OSTP) have requested that federal agencies develop outcome-oriented goals for their science and technology activities (Orszag, 2010).

“Agencies, in cooperation with OSTP and OMB, should develop and sustain datasets to better document Federal science, technology and innovation investments, and to make these data open to the public in accessible, useful formats. Agencies should develop and regularly update their data sharing policies for research performers and create incentives for sharing data publicly in interoperable formats to ensure maximum value, consistent with privacy, national security, and confidentiality concerns.
Agencies should develop outcome-oriented goals for their science, technology and innovation investments; establish timelines for evaluating the performance of these activities, and target investments towards high-performing programs in their budget submissions. Agencies should support the development and use of ‘science of science policy’ tools that can improve management of the R&D portfolios and better assess the impact of their science, technology, and innovation investment” (Orszag, 2010).

Existing agency approaches are not adequate to respond to this request. The Science of Science Policy Interagency Working Group, a subcommittee of the National Science and Technology Council’s Social, Behavioral and Economic Sciences subcommittee,3 summarized current agency practice in a report entitled the Science of Science Policy: A Federal Research Roadmap (OSTP, 2012). The roadmap found that agencies and departments across the Federal Government face similar challenges when setting scientific priorities and assessing the effectiveness of current and planned investments.

One of the Roadmap’s key findings was that the current data infrastructure was inadequate for decision-making. It recommended that federal government agencies should work in concert to establish a theoretical and empirical framework to understand the science and engineering enterprise within the context of the science of science policy. It encouraged investment in the development and use of emerging tools, methods, data, and data infrastructure to enable science policy decision makers to base investment decisions on more rigorous and quantitative analyses.

The passage of ARRA, and the focus on reporting the jobs associated with science investments, led to two agency concerns. The first was the accuracy of the approach used in the reporting process. The second was the limited nature of that reporting requirement, since science investments have been documented to have longer-term impact in many areas, including scientific outcomes. At the same time, it was clear that continuing to require research institutions and principal investigators to manually report the outcomes of research was neither practicable nor desirable (Lane, 2010). A recent study titled, “Reforming Regulation of Research Universities,” provides a good summary of the challenges; it finds that poorly integrated federal reporting and other regulations are imposing a heavy and growing administrative burden on federally funded research. The report argues that this “regulatory overhead” is both large (and getting larger) and often inefficient, with many federal reporting requirements overlapping and even conflicting. It estimates that 42% of faculty time relating to federally funded research is spent on administrative duties, rather than on the research itself (Smith, Trapani, Decrappeo, & Kennedy, 2011).

Approach

As the first step in this pilot, stakeholder groups from the research community were invited to respond to specific questions focusing on the needs of their respective groups. At the beginning of November, 2011, the FDP SciENcv working group sent questionnaires to institutions and organizations all over the country to solicit feedback from targeted groups including: new and seasoned research faculty, research administrators, and technical staff responsible for research information technology (IT) systems. The group sent questionnaires to FDP member institutions, American Association for the Advancement of Science (AAAS) fellows, National Institutes of Health’s (NIH) President’s Early Career Award for Scientists and Engineers (PECASE) nominees, National Science Foundation (NSF) Faculty Early Career Development (CAREER) Awardees, the Association of American Universities (AAU), Association of Public Land Grant Universities (APLU), National Academy of Sciences (NAS), Association of American Medical Colleges (AAMC), and American Association of State Colleges and Universities (AASCU), and many others.

A review of the questionnaire results provides a foundation for the work of the SciENcv pilot team. Since its release in early November, over 600 individuals have completed the questionnaire – a response rate well above the team’s expectation. Initial results indicate the following:

◆ Research faculty strongly desire a resource reducing the requirement to provide repetitive information in applications and reports, with nearly 3/4 of the respondents citing the need to repeatedly enter current and pending support information (when agencies already have the information) as the ‘most burdensome’ requirement.

◆ Research faculty indicate a need for a common platform to maintain profile information, with over 2/3 of the respondents wanting an automated repository of Biosketch information.

◆ None of the existing CV Profile Systems shows widespread use among respondents – the most often mentioned available system shows fewer than 10 respondents’ adopting it.

◆ Research faculty show a desire to be involved in the development process, with over 2/3 of the respondents indicating a willingness to be involved in a more intensive discussion to provide detailed feedback in the development process.

◆ Those from the technical community show a high interest in continuing to be involved in the pilot (over 2/3 of respondents) with the administrative group at a slightly lower rate (just under 60%).

Based on these initial results and further conversations with stakeholders, the goal of the SciENcv pilot is to capture individual profile information from a variety of existing resources and make it available to the investigator on a voluntary basis. Similar to LinkedIn and other social and professional networking opportunities, the service will allow individual control of profile information and its visibility to the scientific community and granting agencies. In addition, the service will allow
the individual to link ownership of existing reports and publications to a unique, persistent identifier for the researcher, making it transportable from one institution and one agency to another. This resource will assure that only the most accurate and current information is presented when the researcher opts to share it (ORCID, 2012).

The groups collaborating on the SciENcv pilot know that a quick turnaround of results is critical to demonstrating reduced investigator burden, increased data quality, and the future success of the SciENcv profile system. All stakeholders stand to benefit from the near- and long-term benefits of the SciENcv project; collaboration and support of the FDP, the Research Business Models and Science of Science Policy Working Groups are crucial steps in improving the way faculty, institutions, and funding agencies interact with profile data. This work has the potential to revolutionize the grant lifecycle and provide decision support information for institutional and agency leadership. For more information and pilot progress, please visit the FDP web site at http://www.thefdp.org.

References
About the Authors

Lori Ann M. Schultz is the Assistant Director of Sponsored Projects at the University of Arizona and the FDP Lead for the SciENcv pilot. Lori has worked in research administration at the UofA for 18 years.

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Implementing Election Research Administration Systems: Lessons Learned

Lynda S. Wolter, The University of Chicago

Electronic Research Administration (eRA) systems are becoming commonplace in our field, and successful eRA projects require clear direction and planning. Institutions considering a new system face a range of options, from off-the-shelf, vendor-maintained systems to fully-customized solutions. In any scenario, an eRA project is a complex undertaking that will bring together functional users, programmers, and senior management sponsors, among others, to meet the task. This article, which is based on a discussion group led at the NCURA 54th Annual Meeting, lists some considerations for planning an eRA system implementation and some lessons learned from past implementations. Careful upfront planning can help ensure a successful outcome.

Define the Scope
“eRA system” may mean different things to different people. Some may envision a grants-only system for review and approval, while others may see a soup-to-nuts system for multiple award types that incorporates system-to-system submission and post-award accounting. Defining and documenting the project scope allows for a common understanding of the solution, and it can be used to explain the future vision to end-users. A high-level scope document is the first step.

A scope-of-work (SOW) should include a description of the solution, key goals or outcomes, expected benefits, and define the executive sponsors and other key players responsible for the project. If there are known implementation deadlines, it should include these. It should explicitly identify any specific activities that are not in scope as “out of scope.” And, it should identify the party or group responsible for long-term maintenance of the eRA solution. Pulling all of this information into one document at the outset provides the project team with a reference document and draws a broad outline of the tasks involved in the successful solution implementation. Thus, the SOW is a powerful tool for discussion with end-users and constituents of the project. It lays out expectations, starts the overall communication strategy, and keeps the project on task.

The scope also is the launching point for defining more specific requirements and solution needs. The document will help the IT team understand the project goals, and it can be used to educate them on the specific solution. A particular eRA solution may use cutting-edge technology, so the value of the scope document for educating IT personnel should not be underestimated.

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Define the Solution Requirements

Once the scope document is set, the next step is to define the specific solution requirements. This is where the specific details take shape, and tough questions are required to ensure that the guiding documents lead to the desired system functionality.

◆ What is the budget?
◆ What are the “must-haves?”
◆ Should the system include a particular feature or function simply because it can be programmed? How often will that particular feature or function be used?
◆ What are the institutional requirements for security, interoperability, accessibility, etc.?
◆ Will the new system require a redesign of the current business process?
◆ Is the new system supported by organizational policy changes, or is it meant to drive them?

There are many hard conversations to have early on, and a key lesson is to learn to say “no.” Whether pushing back on sponsors pressing to do more with less or pushing back on stakeholders who simply want more functionality, managing expectations helps to ensure that the final requirements can be met with the available resources. Scope creep takes up resources and may detract from the real project requirements, so difficult choices made early will generally result in a smoother project in the long run.

Identify the Key Players and Required Staff

A successful eRA project will involve numerous functional participants and stakeholders, so it is important to outline the project team and develop the organizational chart. It’s best to start from the top and clearly identify the executive sponsors and business owners of the project. This illustrates the ultimate institutional support for the project and shows who is ultimately accountable for the budget and can make the tough decisions. From there, appoint the advisory and steering committees, and the technical and business teams. Don’t forget to include the specific project-oriented teams: testing, quality, training, and communication. Creating an organizational chart with all the team members and making it part of your overall communication strategy, will let everyone know their role in the effort.

As an organization chart is created, staffing needs will become apparent, and there will be multiple considerations to ponder. Will there be staff from the research administration office dedicated to the project? If so, how much of their time will be committed. Who are the technical staff and how much of their time is needed? The scope and timing of the project will help in determining whether full-time dedicated business and technical staff are required or whether part-time staff is sufficient. Larger projects tend to benefit from dedicated project management staff – project managers and project assistants to keep all the logistics of the project, coordinate meetings, project reports and updates and keep the project plan. The end-users of the system/process are also essential members of the project team, so involve them early on in requirements gathering, design sessions, and testing and communication.
plans. As the chart is fleshed out, clearly identify lines of authority for decision-making. For example, specify which decisions rest with stakeholders and end-users and which can be made by IT.

**Use Available Software Tools**

While the overall goal of an eRA project is to develop a customized enterprise software application, the effort often benefits from using available off-the-shelf software. For example, scheduling or project management software can be useful to help understand the project phases – requirements gathering, design, development and build, testing, training, and deployment. The project manager needs to keep track of the inter-dependencies of all of the tasks and manage the overall project deadlines, so such software will make their life much easier.

Accounting and budgeting software can help manage project costs. As in developing a sponsored project budget, thoughtful consideration must be used in developing an eRA project budget. Whether with an enterprise accounting software, a small business accounting package, or an Excel spreadsheet, tracking and managing costs is key. The successful eRA project must have a mechanism to track implementation and operation costs versus the initial budget (for hardware and software costs of implementation, annual licensing costs, ongoing staff costs for operation, etc).

Finally, other technologies, such as web sites, SharePoint sites, and document repositories, can be used to organize and share project documentation. As a basis for project communication, these tools can ensure that all team members are regularly informed of project status and that the particular functions are aware of changes that impact their deliverable. In addition to high-tech solutions, old-fashioned low-tech face-to-face communication is a remarkably effective means of sharing information. So, regular town hall, staff, or stakeholder meetings should be part of any communication strategy.

**Test and Commission the System**

Once the eRA solution is operational, it should be stress-tested prior to deployment. Such tests should be based on real-world scenarios at the particular institution. A dedicated testing group can test and document a system. However, tests of actual business scenarios run by actual end-users can identify the not-so-obvious system bugs. This will demonstrate system performance under work-day conditions. Be aware, testing with end-users should be done prudently. The system should be largely functional and de-bugged prior to their use, as this will be their first impression of the system.

**Train the Users**

As part of the overall project plan, spend some time developing a training strategy and resources. Consider the current business process and how they will change with the eRA system, then develop specific training for the changes. Understand what resources already exist (e.g. trainers, computer classroom space, training scripts, etc.) and use them. Remember that adults learn in different ways, so tailor training materials to match skill levels, to the extent possible. Quick reference
guides and a “live” training environment are helpful. Finally, consider basic research administration orientation for the IT staff, to help them understand the business and appreciate how the business drives the eRA solution.

**Convert Legacy Data and Build Reports**

Converting data for use by a new eRA system will allow the retirement of an existing system. However, converting data can be a project unto itself, with requirements for timing, resources, technical staff, and costs. Do not make assumptions when converting data and carefully consider what portion (if not all) of the legacy system that will be converted. Practice the data conversion with mock conversions to understand how the conversion will work. Test both native and converted records. Lastly, include the conversion plans in the overall communication strategy, to help end users understand what is and is not included in the solution.

With a repository of converted records and a stream on incoming new records from the new system, the next concerns are data management and reporting. The sudden wealth of data can promise reporting options that did not previously exist. However, while data management and reporting begin in earnest near the end of a project, the management and reporting needs should be part of the solution design from the beginning. This will ensure that the data elements are included in the production system. It will also allow definition of individual elements, their use, their expected evolution over time, and their optimal configuration for warehousing. For example, if system metrics are envisioned, then the data elements to support them should be part of the initial design. Similarly, the decision of whether to generate reports from the live production system or from a standalone data warehouse is best considered early in the system design process. Like data conversion, constructing a data warehouse is itself a significant project with the similar considerations.

**Conclusion**

The preceding list is by no means exhaustive with respect to developing an eRA system. The points identified are more like the tips of an iceberg. However, as with an iceberg, knowing it’s there (i.e. knowing what to expect) provides a huge advantage in dealing with it. eRA systems are here to stay, and it’s only a matter of time before an implementation is likely to begin at any particular institution. For those charged with managing such a project, following the steps outlined above can help them navigate the most treacherous aspects to arrive safely at the other side.

**About the Author**

**Lynda S. Wolter** is currently the Deputy Director of University Research Administration at The University of Chicago, and she has spent her entire twenty-plus-year career at the institution. She began as a departmental administrator, and she has since worked in a variety of settings including department, research institute, and Dean’s and central offices. She was recently business lead for implementation of the University’s first eRA module for grant/contract management. You can reach her at lswolter@uchicago.edu.
¶920.10 Do You Have the Right NIH Forms?
National Institutes of Health

We are required to update our application forms from time to time to implement new regulations and requirements. When substantial changes are made in our applications, all applicants must use the same forms and instructions (referred to as an application package) to ensure a fair review.

How can I tell old application packages from new ones?
Each application package we post in Grants.gov has a “Competition ID”. We use this field to identify the version of forms and instructions included in the application package. Application packages are designated alphabetically to indicate the most recent version (e.g., FORMS-C, FORMS-D). The Competition Title, which often accompanies the Competition ID, provides additional guidance to help you choose the appropriate application package (e.g., Use for due dates on or after 5/25/2016).

We’ll alert you to upcoming form changes through notices in our NIH Guide for Grants and Contracts and other channels. These notifications indicate the appropriate Competition IDs and timelines for their use.

Examples:
◆ NIH and AHRQ applications submitted to due dates on or after May 25, 2016 must use application packages with a Competition ID of FORMS-D (NOT-OD-16-004).
◆ Impact of Grant Application Form Update (FORMS-D) on Late and Continuous Submission Applications (NOT-OD-16-064)
◆ Plan to Move to Updated Forms (FORMS-D) for Administrative Supplement, Successor-In- Interest and Change of Institution Opportunities (NOT-OD-16-068)

Most of the time, FOAs have a single application package – just the one you need. During a transition to updated forms, there may be multiple application packages listed for a single FOA.

When more than one application package is available, you should typically choose the most recent one. However, exceptions do exist. For example, if you are applying late or under our continuous submission policy and the older version was used for the intended due date, then you may need to select the earlier application package.

Where will I see the Competition ID when preparing my application?
The Competition ID is visible in different places depending on your submission method:
◆ ASSIST
◆ Grants.gov downloadable forms
◆ Grants.gov workspace
◆ System-to-system solutions

ASSIST

ASSIST Application Initiation
You will see the Competition ID and Competition Title when initiating your application. If more than one application package is available, you will be presented with a pop-up window to select the appropriate application package.

Figure 920.10-1

ASSIST – Work In Progress Applications
After initiation, you will find the Competition ID in the FOA Information found on your Application Summary tab.
Grants.gov Downloadable Forms & Workspace

Downloading Application Forms
You will see the Competition ID and Competition Title when downloading your application package from Grants.gov.
After clicking the appropriate “Select Package” link, you will again see the Competition ID in the summary information provided for the FOA.
Grants.gov Downloadable Forms – Work In Progress Applications

After downloading your application package and opening it in Adobe Reader, you will find the Competition ID in the header information at the top of the set of forms.

Figure 920.10-5

Grants.gov Workspace – Work In Progress Applications

You will find the Competition ID in the FOA Information on the Workspace Details tab.
Where will I see the Competition ID in my submitted application image?

The Competition ID is not visible in the application image we assemble after you submit since it is not actually part of the forms or data.

However, once your application moves forward to NIH staff for further processing (after the two-day viewing window), we automatically generate an application summary page and prepend it to your application image. The Competition ID is available on that summary page.
System-to-System Solutions

Most system-to-system solutions for application preparation and submission allow users to see the Competition ID and Competition Title. However, the details for where to find that information vary by solution. Contact your administrative office or solution provider for guidance.
¶920.11  **NIH Application Forms Update: FORMS-D**
National Institutes of Health

The NIH periodically updates grant application forms in order to remain current with the most recent form sets available through Grants.gov and approved by the Office of Management and Budget. NIH and other agencies serviced by NIH’s electronic Research Administration (eRA) use the ‘Competition ID’ field of Grants.gov application packages for quick and easy identification of the forms being used for a particular Funding Opportunity Announcement or individual application package.

NIH will introduce application packages with a Competition ID of ‘FORMS-D’ for due dates on or after May 25, 2016.

**Changes to PHS forms included in ‘FORMS-D’ application packages**

*PHS 398 Career Development Award Supplemental Form*

- New “Candidate Information and Goals for Career Development” attachment
  - Combines “Candidate’s Background”, “Career Goals and Objectives”, and “Candidate’s Plan for Career Development/Training Activities during Award Period” attachments into a single attachment
- New “Data Safety Monitoring Plan” attachment
- New “Authentication of Key Biological and/or Chemical Resources” attachment
- Updated Citizenship selections
- Reorganization of attachments
- Field order and label changes
- Added/updated burden statement and form expiration date
- Updated form instructions

*PHS 398 Cover Page Supplement*

- New Vertebrate Animals section added
  - New questions
    - Are animals euthanized? Yes/No
    - If Yes, is method consistent with AVMA guidelines? Yes/No
    - If No to AVMA guidelines, describe method/provide scientific justification
- Ability to add Program Income information for 10 budget periods (previously 5)
- Field order and label changes
- Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS 398 Modular Budget**
◆ Indirect (F&A) Costs section changed to dynamically add indirect costs rather than providing static fields for four entries
◆ Minor label changes
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS 398 Research Plan**
◆ New “Data Safety Monitoring Plan” attachment
◆ New “Authentication of Key Biological and/or Chemical Resources” attachment
◆ Minor format and label changes
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS 398 Research Training Program Plan**
◆ Removed “Background” and “Recruitment Plan to Enhance Diversity” attachments (information previously included in these attachments moved to existing “Program Plan” attachment)
◆ New “Plan for the Instruction in Methods for Enhancing Reproducibility” attachment
◆ New Data safety Monitoring Plan attachment
◆ Format and label changes including categorizing attachments into sections
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS 398 Training Budget**
◆ Minor label changes
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS 398 Training Subaward Budget Attachment(s) Form**
◆ Streamlined instruction text
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions

**PHS Assignment Request Form**
◆ New, optional form
Used to provide structured information to NIH referral staff regarding: funding component assignment preference, study section preference, individuals who should not review your application due to conflicts, and scientific areas of expertise needed to review your application

Complements existing “Cover Letter Attachment” on SF424 (R&R) form

Added/updated burden statement and form expiration date

Updated form instructions

**PHS Fellowship Supplemental Form**

- New “Applicant’s Background and Goals for Fellowship Training” attachment
  - Combines “Doctoral Dissertation and Other Research Experience”, “Goals for Training and Career”, and “Activities Planned Under Award” attachments into a single attachment
- New “Letters of Support from Collaborators, Contributors, and Consultants” attachment
- New “Description of Institutional Environment and Commitment to Training” attachment
- New “Data Safety Monitoring Plan” attachment
- New “Authentication of Key Biological and/or Chemical Resources” attachment
- New Vertebrate Animals questions added
- New questions
  - Are animals euthanized? Yes/No
  - If Yes, is method consistent with AVMA guidelines? Yes/No
  - If No to AVMA guidelines, describe method/provide scientific justification
- Updated list of values for the “Field of Training for Current Proposal” field; changed from 4-digit codes to 3-digit codes
- Updated Citizenship selections
- Reorganization of attachments
- Format and label changes
- Added/updated burden statement and form expiration date
- Updated form instructions

**PHS Inclusion Enrollment Report**

- Combines Planned Enrollment Report and Cumulative Inclusion Enrollment Report forms into a single form
- Questions used to identify type of report:
◆ Delayed onset study? Yes/No
◆ Enrollment Type? Planned/Cumulative (Actual)
◆ Using an Existing Dataset or Resource? Yes/No
◆ Enrollment Location? Domestic/Foreign
◆ Clinical Trial? Yes/No
◆ NIH-Defined Phase II Clinical Trial? Yes/No
◆ Added/updated burden statement and form expiration date
◆ Updated form instructions
This section includes practical guidance and tools — charts, checklists, etc. — relating to electronic research administration. This material is culled from a variety of authoritative sources.

**Grants.gov Implementation**

AIS editors

Research administrators should regularly check the Grants.gov Web site for system and deployment updates. Grants.gov “alerts” provide users information on such things as when the system is experiencing high-volume processing delays and when it is shutting down for maintenance. Quarterly stakeholder meetings/Web casts on a variety of topics also are being held throughout the year.

To avoid having to submit corrected applications, applicants are reminded to read and follow all application guides and announcement instructions. Research administrators are reminded that agencies generally publish their own electronic submission guidelines, which should be followed. (See ¶130.3 for a listing of Web sites for all 26 major funding agencies.)

Grants.gov users are encouraged to submit comments to Grants.gov on problems encountered, and also to make individual agencies aware of application-specific problems.

NIH offers the following advice to PIs who might experience problems with Grants.gov that could interfere with timely submission of an application:

1. Contact the Grants.gov Contact Center to document and help resolve the submission issues.

2. Document the issue with the eRA Commons Help Desk, making sure to include your Grants.gov support ticket number.

3. If the eRA Commons Help Desk “is able to verify a system issue that is be-

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**Grants.gov Contact Center**

- The Contact Center is open 24/7, except for federal holidays (it is closed). Contact the center at 1-800-518-4726 or via email at support@grants.gov.

- The Contact Center is staffed with Customer Service Representatives who can answer general questions related to Grants.gov and technical questions about the submission of a grant application. The Contact Center does not answer questions or deal with issues pertaining to a specific grant opportunity.

- Grants.gov has set up a self-help Web portal (iPortal) that offers 24-hour assistance: www.grants.gov/iportal. You can access the iPortal from the Grants.gov homepage or Contact Us page. The feature includes the top-10 requested help topics, a searchable knowledge base (400 answers to common topics), self-service help ticket generation, live one-on-one help via Web chat (available 7:00 AM – 9:00 PM Eastern Time), as well as alerts and updates.
beyond your control, you will be placed on a Systems Issues list that is shared with NIH’s Division of Receipt and Referral and your application will not be considered late, as long as the submission process is completed within the two-day error correction window. If you are unable to complete the submission within the error correction window, you will need to provide sufficient justification for additional time.”

Usage Trends. In its fiscal year 2009 annual report, Grants.gov provides a number of statistics on usage trends that are well worth reviewing. Federal grant-making agencies are required to post a significant amount of their grant opportunities and application packages on Grants.gov. As such, those institutions wanting to apply for federal grants are forced to use the system.

Figure 930.1-1 shows the number of grant opportunities posted to Grants.gov by fiscal year; figure 930.1-2 illustrates the number of closings. (Note: Some agencies chose to use alternate systems to process grant applications during the heightened period of demand in FY 2009 resulting from the Recovery Act.)

**Figure 930.1-1: Submissions Received at Grants.gov**

![Bar chart showing submissions received at Grants.gov from FY2005 to FY2009](image)

Source: Numbers supplied by Grants.gov.

As seen in Figure 930.1-3, the growth of registered users — authorized organization representatives (AORs) — continues. The system-to-system community (S2S) is also continuing to grow, as seen in Figure 930.1-4.

Forms Development. Information on forms under development, including the SF 424 family of forms, is accessible from the “Forms Factory Control Log” button on the Grants.gov Blog site (grants-gov.blogspot.com).

Update on Adobe. Grants.gov reminds applicants that the Grants.gov “compatible version of Adobe Reader” is required for viewing, editing, and submitting a complete grant application package to Grants.gov and is available for free.
downloading on the Grants.gov site. Further, “Any and all edits made to the Adobe Reader application package must be made with the compatible version of Adobe Reader. Grants.gov does not guarantee to support versions of Adobe Reader that are not compatible with Grants.gov.” Available to assist applicants is an Adobe Reader “test package” used to verify if you have the correct version installed on your computer. You can access the test at www.grants.gov/applicants/AdobeVersioningTestOnly.jsp.
NIH reminds applicants that “the overall electronic submission process of finding opportunities, downloading application packages, preparing forms, preparing attachments, and submitting applications remains the same. Although the new Adobe forms have a slightly different look and feel from the PureEdge forms, the changes are mainly cosmetic.” Grantseekers may wish to bear this mind when working with Adobe application forms from other agencies as well.

**Resources for Applicants.** Grants.gov has put together an online resource for the applicant community called “All About Grants.” The Web page — www.grants.gov/applicants/all_about_grants.jsp — includes information on Grants.gov webinars and upcoming events, tips and resources from grantors, and articles and links to related associations and organizations. A separate applicant resource, in the form of a handy flowchart, is provided by Grants.gov and included as Figure 930.1-5, page 930:7.

Also available is a “Troubleshooting Tips” page (at www.grants.gov/help/trouble_tips.jsp) that includes help verifying your Authorized Organization Representative (AOR) status, using your E-Business Point of Contact (E-Biz POC) login, accessing search results, among other things.

**Grants.gov Redesign.** “Grants.gov conducted a study on the site’s usability and has identified key areas of confusion and difficulty” with the current site, according to the latest issue of the system’s newsletter, *Succeed*, and an upcoming redesign “answers those usability issues.” Some of the promised features are a “quick and easy login located in a universal header” to appear on every page of the site; an easier way to search for opportunities; a “feature module” for Find, Apply, Register

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**Figure 930.1-4: S2S Submissions Received at Grants.gov**

<table>
<thead>
<tr>
<th>Year</th>
<th>Submissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2005</td>
<td>596</td>
</tr>
<tr>
<td>FY2006</td>
<td>7,750</td>
</tr>
<tr>
<td>FY2007</td>
<td>13,864</td>
</tr>
<tr>
<td>FY2008</td>
<td>30,194</td>
</tr>
</tbody>
</table>

*Source: Numbers supplied by Grants.gov.*
and Track; and new navigation tools. There is currently no “anticipated go-live date,” although it’s likely to be sometime in fiscal year 2012.

**Tips for Last-Minute Proposal Reviews.** When you as the proposal reviewer only have a short period of time available before an impending deadline, you may have to ask yourself, “What are the most important items to review?” Electronic submission guidelines aside, a quick focus on the following may be helpful:

- Are the correct forms being used?
- Are there certifications and assurances that need to be made?
- Are the correct rates (F&A, fringe benefits) applied as appropriate in the budget?
- Does the budget add up, and does it conform to limitations set by the funding agency?
- Are there cost sharing and matching requirements, and if so, have the commitments been endorsed by the appropriate institutional official?
- Have the required institutional approvals been received?
- When required by the proposal, are the appropriate animal and human research requirements being met?
- If there are subawardees, have those organizations endorsed their participation?

**Troubleshooting Application Errors**

At a recent Grants.gov webcast, Grants.gov’s Keenon James offered the audience various tips, many of which are likely familiar to users, including the following on avoiding common rejection errors:

- Be sure to use the correct DUNS number on your application and be sure the authorized organizational representative has registered to submit on behalf of your institution.
- Do not use special characters in either your application form or attachment names.
- Do not submit multiple applications for the same opportunity. (If you do, contact the agency, not Grants.gov, to remedy the situation.)

James also mentioned that S2S users should submit their certificate installation requests using the “Certificate Request Form” on the Grants.gov Web site. Renewals, he emphasized, should be submitted at least two weeks prior to their expiration date. Link to webcast and materials: www.grants.gov/help/stakeholder_communications.jsp.
**GAO Identifies Governance, Funding Problems**

In its report released in July 2009, the Government Accountability Office said that one of the key problems for Grants.gov was its “governance, responsibility, and funding.” The lack of coordination of these functions was behind many of Grants.gov’s performance difficulties experienced at the time, according to GAO.

Oversight of Grants.gov is shared by its Programs Management Board, the federal Grants Executive Board, and the Department of Health and Human Service’s Office of the Chief Information Officer, its managing partner. Various federal agencies are responsible for funding its operations.

The report also discussed application deadlines and, in particular, closing times for receipt of applications. GAO pointed out the disparity across federal agencies with respect to such times, which has resulted in confusion for the applicant community. Likewise, there is also a difference among agencies as to what constitutes meeting a deadline, such as is it when the application was actually submitted to Grants.gov or when it was validated by the system?

GAO concluded that the Recovery Act has highlighted the importance of Grants.gov in the proposal submission process and made four recommendations that it thought would improve the process and Grants.gov itself: (1) Develop performance measures. (2) Coordinate funding and management. (3) Establish a user group. (4) Work to create standards for application processing.


A May 2011 GAO report concluded that improvements are still needed in Grants.gov’s “economic efficiency” and to further its “effective management.” GAO was asked to examine factors that should influence HHS’ proposal for a Grants.gov funding model and how its various governing bodies could address the system’s “previously identified governance challenges.” Such challenges include “untimely contributions, a lack of performance metrics, unclear lines of authority, and confusion over roles and responsibilities among Grants.gov’s governance bodies.” Accountability and responsibility for Grants.gov performance among its three governance bodies “remains unclear,” GAO said.

GAO made four recommendations to HHS aimed at improving Grants.gov’s funding calculation, cost tracking, annual and strategic planning, and its knowledge sharing with other electronic government initiatives.

Figure 930.1-5: The Life of a Grants.gov Application Package

The Life of a Grants.gov Application Package

**Grantor**
- Grants.gov is a central storehouse for information on over 1,000 grant programs and provides access to approximately $400 billion in annual awards.
- Grants.gov is the central repository for grant information, offering access to over 1,000 grant programs totaling approximately $400 billion in annual awards.
- Grants.gov is a one-stop-shop for grant information, providing access to over 1,000 grant programs totaling approximately $400 billion in annual awards.

**Applicant**
- Grants.gov screens the application package for technical errors (e.g., virus) and transmits the package to the grantor agency.
- Grants.gov hosts the application package online in a searchable database.
- Grants.gov is a central repository for application packages, where applicants can find and submit their applications.

**Grants.gov**
- Grants.gov hosts the application package online in a searchable database.
- Grants.gov screens the application package for technical errors (e.g., virus) and transmits the package to the grantor agency.
- Grants.gov is a central repository for application packages, where applicants can find and submit their applications.

**FIND**
- Applicant visits Grants.gov to find grant opportunities.
- Applicant gets registered with Grants.gov (required in order to submit an application package).
- Applicant downloads and completes a grant application package (this process can occur during registration).

**APPLY**
- Applicant submits completed application package via Grants.gov.
- Applicant visits Grants.gov to find grant opportunities.
- Applicant gets registered with Grants.gov (required in order to submit an application package).
- Applicant downloads and completes a grant application package (this process can occur during registration).

**SUCCESS**
- Grantor selects and notifies applicant of grant award.
- Grantor reviews the application package.
- Grantor publishes the application package for grant opportunity on Grants.gov.
- Grants.gov establishes a grant opportunity, funding criteria, and Funding Opportunity Number (FON).

Source: www.grants.gov
¶930.2 **Institutional Response to Grants.gov**

AIS editors

As federal agencies are under a mandate to transition their funding opportunities and applications to Grants.gov, research administration Web sites at colleges and universities, in turn, are busily incorporating Grants.gov information and training as an integral part of its services to constituents. (For background on Grants.gov, see ¶905.4.)

Many have developed their own Grants.gov Web sites and training manuals to provide its community with

◆ updated information,
◆ links to agency Grants.gov implementation packages,
◆ institutional instructions and tips, and
◆ training tools and schedules.

Some host in-depth training manuals and presentations for researchers and support staff that contain more than 100 pages or slides. Institutional responses to Grants.gov often vary as a result of many factors including how and when an institution’s funding agencies are transitioning to Grants.gov and different levels of institutional resources available, but they all have certain common themes.

Some institutions, like the University of Michigan, have developed Grants.gov committees to assist in the implementation and training to the campus community. Members of the committee include representatives from information technology (IT) departments, grants officers, support staff, and other individuals involved in the program. The university is using several different communication venues to disseminate information on Grants.gov. Examples include campus newsletter articles, e-mail groups (listservs), meetings with research deans, assistant chairs, and faculty, in addition to creating a Web site specifically for Grants.gov.

Regardless of what method your institution is using to cope with Grants.gov, colleges and universities are strongly urged to contact Grants.gov with user feedback on a continuing basis. Grants.gov also plans to host quarterly stakeholder meetings/Webcasts throughout the year. Research administrators also should consider submitting comments to a Grants.gov “self-help group” coordinated for NCURA by Bob Beattie at the University of Michigan (beattie@umich.edu).

**Training**

Many universities are creating their own training manuals on Grants.gov with content specifically pertaining to policies and issues unique to the institution. The length of introductory material about Grants.gov varies considerably across different manuals. New York University (NYU) posts an eight-page manual, “OSP Procedure: End-User Guide to Grants.gov” at its Web site (www.nyu.edu/osp). A
short paragraph introduces the program and its purpose and also provides links to the portal’s customer support.

Some institutions choose to provide a comprehensive briefing about the development of the program, which usually references Pub. L. 106-107 that created the portal. (See ¶905.3.) Much of the material chosen by institutions is taken from the Grants.gov Web site.

Research administrators will need to update training materials, as institutional needs dictate, once agencies complete the transition to Adobe forms.

**Technical Requirements.** Technical requirements for Grants.gov and related IT issues are leading sections of training manuals. It is important, however, to keep abreast of the numerous changes Grants.gov has undergone or will undergo regarding its IT infrastructure and how that will affect institutional grant seekers.

**Agency Timelines.** Some institutions may be at different stages than others in developing training materials due to the different timelines when certain federal agencies will convert to the system. This affects each institution’s timeline to begin training based on the specific research areas and activities of the university. Most research administrators cover the varying transition dates and timelines of different federal agencies involved in grantmaking in the introductory section of their training and maintain updated information and links to agency transition timelines.

The University of Michigan hosts comprehensive links to agencies at www.research.umich.edu/era/grantsgov/index.html and the University of Maryland at www.umresearch.umd.edu/ORAA/era/systems.html, which contains information on specific e-submission systems used by campus researchers and in-house contacts for each specific system.

Often institutions, like the University of South Carolina, offer training in general or “overview” Grants.gov and agency-specific training, such as for “Grants.gov and NIH.” Other institutions offer agency-specific Grants.gov help upon request.

**Resources Available at Grants.gov**

Linking directly to Grants.gov and using its images and forms in slides is a popular technique used by many institutions in their training manuals. The portal itself is a natural place to begin in constructing a guide. On the front page of Grants.gov, the link “Check out our Webcast: Get Started With Grants.gov,” may seem like a good starting point. However, the Webcast is most useful for obtaining information on how to register the institution for Grants.gov. Detailing this information in an institutionwide training manual or Web site is unneces-
sary since these steps do not involve individual researchers and may even add confusion if included.

The Webcast is designed specifically to instruct research administration staff on matters such as receiving a data universal number system (DUNS) for the institution, registering with the Central Contractor Registry (CCR), and designating an e-business point-of-contact and authorized organization representative (AOR). Several institutions emphasize strongly to constituents that registration by researchers or business managers is unnecessary at Grants.gov since the institution itself should already be registered.

Grants.gov does have an official “User Guide” located at www.Grants.gov/help/user_guides.jsp. This guide can also be tailored to include specific messages and instructions by institutions. A good example of this practice is University of Maryland’s training guide located at www.umresearch.umd.edu/ORAA/era/grantsgov_docs/sept_ggov.pdf. Other institutions, like Johns Hopkins University School of Medicine, have incorporated the information into their own training manuals rather than using the Grants.gov user guide as a template. (www.hopkinsmedicine.org/Research/ora/index.html).


After the introductory comments and software instructions for Grants.gov, most institutions’ training manuals follow somewhat closely the outline and pattern of the instructions posted under the “Apply For Grants” section on Grants.gov, which lists the remaining steps as “Download a Grant Application Package and Instructions,” “Complete the Selected Grant Application Package,” “Submit a Completed Grant Application Package,” and “Track the Status of a Completed Grant Application Package.”

Several training manuals at universities include pictures of forms taken from these sections with detailed instructions and other information written in the margins that directly pertains to the institution. The University of Michigan’s Division of Research and Development Administration training guide sums up the remaining training topics as searching for applications on Grants.gov, opening the application, filling out the application, sending the application to the research administration office, and detailing what happens once an application is submitted.

Deadlines and Other Policies
To address concerns about technical errors and other issues in the submission process, many universities are changing their deadline policy in regards to when proposals are due to the research administration offices. Research administrators are now requesting that researchers and their staffs submit applications sooner to their offices to create a longer lag time before the submission deadline to Grants.gov. Extra time is needed to deal with technical and other issues that may arise with this new system.

Document Storage. Several institutions have IT systems where an applica-
tion or proposal is electronically submitted to the research administration office for review before its submission to Grants.gov. The use of these systems or servers has created new IT challenges for research administration offices to deal with issues such as the storage of these documents and naming conventions for them. These challenges reinforce the importance of having IT staff an integral part of a Grants.gov committee.

**Earlier Internal Deadlines.** Stanford University, for example, has implemented a new five-day internal deadline requiring final copy of a completed proposal to be submitted to the research administration office five business days before the sponsor agency’s deadline. Stanford has also assigned an institutional official that is responsible for verifying that a proposal has been accepted and validated in Grants.gov, in addition to verifying with the sponsoring agency that the application has been received and accepted in their system as well. Research administrators play a vital role as a liaison to their researchers during the two-day “window periods” that occur once a proposal is submitted to Grants.gov, and then when it is submitted to the sponsoring agency. These periods are the timeframes when either Grants.gov or the agency verifies receipt of the application and reviews them for any errors.

**Other Topics Addressed**

Stanford’s policy reinforces the concept of Grants.gov serving as an administrative portal where its main functions are to provide researchers one area to search and apply for grants. However, its scope after those functions is narrow. Specific agency systems such as NSF Fastlane and NIH Commons are still playing a major role in the application process. Researchers need to understand that Grants.gov is currently an administrative portal that forwards applications onto the specific agency for review.

The University of Michigan encourages its researchers to register with the sponsoring agency, in addition to applying through Grants.gov. Its training manual includes a “Do’s and Don’t’s” checklist for the program.

It is beneficial to maintain contact with sponsoring agencies and subscribe to their e-mail listservs, which may provide more in-depth and timely alerts for researchers and administrators. (For example, for NIH go to era.nih.gov/ElectronicReceipt and click on the “Subscribe to the latest eSubmission News!” box.) Similarly, some universities also have developed in-house listservs to keep their communities informed on changes to Grants.gov implementation.

In addition to a full training manual, several universities also post a one-page reference document that takes users through the five main steps of Grants.gov. One example can be found at Texas Tech University’s Web site (www.ors.ttu.edu/NEWORS/NewHome/Grants_gov/Grants_gov.html). Many universities use the same or a similar document, and it provides a brief overview of the entire process that may be a useful tool in terms of developing a larger and more in-depth training manual. The contact information for a university’s research administration office can also be posted on this document.
Some institutions offer training in a classroom or computer-lab setting with some supporting material and information about Grants.gov on their Web sites. Some such as Wayne State University (www.spa.wayne.edu/grants.html) offer online registration for the sessions and strongly encourage all stakeholders in research areas to participate in a session in the near future. Texas Tech University offers a Webcast of a training seminar for staff who are not able to attend an in-house session (www.ors.ttu.edu/Newors/newhome/Grants_gov/GG_Training.html).

**Ongoing Refinement**

The development of Grants.gov is a continuing process that requires monitoring the Web site for new and additional information and tools that may develop over time. Institutions will likely refine their training manuals and tools in response to changes to Grants.gov and agency-specific implementations, as well as in response to the evolving needs of their constituent groups. It is important to stay abreast on how other universities are developing and refining their training as well.
Knowledge Check

The Q&As at ¶990.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 900 has been understood. Note: For the answer key for ¶990.1, see ¶990.3, which appears on a separate page (page 990:5) for testing purposes.

Discussion topics at ¶990.2 are designed to engender dialogue among staff on general issues of importance in the field.

Q&As

1. NSPIRES is an electronic research administration system used specifically by which federal agency(ies)?
   (a) NIH
   (b) NASA
   (c) NASA and Department of Energy
   (d) NSF

2. Activities of the P.L. 106-107 “work groups” include development of all of the following EXCEPT:
   (a) Uniform administrative rules across agencies
   (b) Common electronic processes
   (c) Uniform terms and conditions for all federal contracts
   (d) Common data elements for applications and reports

3. According to ¶905, what does S2S stand for?
   (a) Science-to-science
   (b) Science-to-system
   (c) System-to-software
   (d) System-to-system

4. A DUNS number is obtained from what organization?
   (a) Dun & Bradstreet
   (b) Office of Management and Budget
   (c) Central Contractor Registry
   (d) Adobe Software
5. “Bits and bytes are sent to a mathematical formula, which turns readable text into what appears as random characters.” This is a brief definition of
(a) Signing on
(b) Decoding
(c) E-signature
(d) Encryption

6. What does the FFATA do?
(a) It appropriates grant award funding for federal agencies for FY 2007.
(b) It requires the creation of a public Web site that provides searchable funding information on federal awards.
(c) It was the legislation that mandated the creation of Grants.gov.
(d) It funds the Federal Grants Streamlining Initiative.

7. According to Grants.gov, PureEdge forms will eventually be replaced by
(a) Adobe forms viewer
(b) Google forms viewer
(c) Microsoft Office forms viewer
(d) Nothing; forms are being phased out.

8. The system that implements digital signatures and allows them to be used with specific programs to offer secure communications is called
(a) Public Sector Authorization
(b) Electronic Signature Authorities
(c) Public Key Infrastructure
(d) Personnel Key Infrastructure

9. Now that Grants.gov appears to be firmly established, which of the following statements is TRUE?
(a) Use of NIH Commons will be phased-out in the near term, likely by the end of FY 2007.
(b) Use of NSF FastLane will be phased-out in the near term, likely by the end of FY 2007.
(c) Neither (a) nor (b)
(d) Both (a) and (b)
Discussion Topics

1. What system do you have in place to help ensure that faculty are aware of all the changes that are taking place with respect to Grants.gov and the necessary specific forms required for each application submitted?

2. What is the proper role for the office of research administration at your institution with respect to the development, refinement, and application of software for tracking award applications, acceptance, monitoring, etc.?

3. How effectively does your electronic research administration system interact with or integrate with other systems at your institution, such as payroll, human resources, etc.? What role can you play in ensuring a helpful integration?

4. How is your ERA system adapting to the special reporting challenges arising from the Federal Funding Accountability and Transparency Act and American Recovery and Reinvestment Act?

5. How are you navigating through the various application systems, now that agencies such as NSF are bypassing use of Grants.gov? What special challenges have confronted you and what has been your response? Are there process changes you need to yet make in order for your office to improve your response?

6. Did you participate in the latest flurry of applications submitted for American Recovery and Reinvestment Act funding? How/what can you learn from the experience?

7. What, if any, services at your institution have yet to transition to “electronic” research administration? Can they/will they ever become ERA services? If not, why not?
1990.3  **Answer Key**

Following are the correct answers to the questions included at ¶990.1.

1. (b) NASA
2. (c) Uniform terms and conditions for all federal contracts
3. (d) System-to-system
4. (a) Dun & Bradstreet
5. (d) Encryption
6. (b) It requires the creation of a public Web site that provides searchable funding information on federal awards.
7. (a) Adobe forms viewer
8. (c) Public Key Infrastructure
9. (c) Neither (a) nor (b)
PLACE TAB

¶ 1100
Training and Education
Chapter 1100
Training and Education

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Introduction

AIS editors

Institutional training programs have grown from periodic individual classes to comprehensive curricula, often with mandatory requirements, in order to meet the demands of an ever-changing sponsored program environment. Increases in federal funding coupled with significant growth of regulatory oversight have combined to prompt institutions to consider how best to train and prepare their research administrators to meet these challenges.

Julie Cole, of Duke University, examines the basic concepts to be considered when developing training programs, both from the perspective of building the training “in-house” and/or partnering with professional organizations to meet training needs. She discusses the considerations that help to shape institutional strategies and factors that influence the format and resourcing for training programs. Also discussed is the important link between institutional drivers and training outcomes. This chapter identifies the foundational steps in building training from the ground up.

In tight budget times, college and university leaders expect a return on the resources and the faculty/staff time invested in training. Training programs have grown significantly in the past decades, whether prompted by increased compliance requirements, growth in sponsored program funding, need for increased faculty support in grant management, or simply the ability to prepare and retain skilled professionals. Training programs succeed when they are closely associated with institutional needs, and when content and delivery is correlated to specific institutional dynamics and especially to the audience the training intends to serve.

This chapter will continue to respond to the information needs of research administrators over time. Future editions will provide additional detail and discussion points to help guide institutions in developing and refining their training initiatives.
Training and Education

Julie Cole, Director of Research Costing Compliance, Duke University

In recent decades, both the number and diversity of universities and colleges receiving external dollars for research and related endeavors have expanded dramatically. While the investment, mostly from federal agencies, has sparked exciting scientific and medical advances, securing and managing it is baffled by ever-changing guidelines, program requirements, rules, and regulations. The issuance of the Office of Management and Budget Uniform Guidance, among several other federal changes, provides an opportunity to rethink institutional processes and policies and the most appropriate means of communicating these significant changes to various grant management constituencies.

Many institutions are turning to training/professional development to ensure a vigorous and compliant environment. Most recognize that well-trained specialists in grant management are essential to the success of sponsored programs. The consequences of limited compliance knowledge and poorly informed award management can be severe — from proposals that are rejected because of formatting or missed deadlines to major institutional audits resulting from noncompliant policies and practices. Faculty are well prepared for teaching and research but not for the demands of regulation and financial management. They must rely on the grant manager to relieve them of this time-consuming burden and to protect the institution from noncompliant actions.

In the past, grant managers acquired their knowledge of sponsor rules and regulations “on the job.” With greater responsibility for the growing complexity of the field, interest in developing training programs — both institutionally and among national professional groups — is an obvious outcome.

This chapter examines the pros and cons of building the training “in-house” and/or partnering with professional organizations to meet training needs. Certain federal mandates require specific training for faculty in areas of research development and conduct which are generally managed by dedicated institutional units related to the research area. Thus, the focus of this chapter is on the training of research administrators — those professionals who provide support and technical expertise in developing and submitting proposals and managing compliant funded projects. Topics address the decisions, planning, resourcing, and deployment actions that must be considered in creating and/or enhancing research administration training.

Why Develop Training Programs?

What factors prompt an institution to develop training and professional development activities for faculty and staff who manage grant traffic? They fall into four broad categories:

1. ensuring compliant grant management and maintaining currency in a rapidly changing funding environment;
2. improving service and support to faculty;
3. adopting related technologies, processes, and policies; and
4. developing and maintaining a skilled workforce.

Each of these factors will be discussed in turn.

**Reason #1: Compliance Management**

For many institutions, the impetus for training programs comes from compliance concerns and sponsor mandates. Historically, the U.S. Federal Sentencing Guidelines (§8B2.1, www.ussc.gov), established in 1987, had significant impact. They list seven elements that constitute an “effective compliance and ethics program”:

- compliance standards and procedures (e.g., a code of conduct or ethics);
- oversight by high-level personnel (e.g., a compliance or ethics officer and/or committee);
- due care when delegating authority and responsibility;
- effective communication of standards and procedures (e.g., training);
- monitoring systems and reporting mechanisms;
- enforcement of disciplinary mechanisms; and
- appropriate response after detection.

A series of proactive site visits conducted by the National Institutes of Health (NIH) in the early 2000s reinforced the concept of training as a way to mitigate non-compliance. NIH “subject area descriptions and observations” demonstrate the need for a skilled cadre of grant management personnel:

**Description of Subject Area**

_The institution should have a program of ongoing institution-wide training and education of all responsible staff involved in NIH-supported research to ensure consistent and accurate guidance on policy interpretation is provided to faculty and staff. The institution should be committed to sustaining the training and education program to meet the needs of new employees and provide appropriate updates for all employees. Roles and responsibilities of PIs, departmental administrators, sponsored projects officials and other institutional offices that have responsibility in the areas of grant compliance and Institutional oversight should be clearly defined and communicated. See http://grants.nih.gov/grants/compliance/compendium_2002.htm#desc._

Many institutions have taken NIH guidance as a framework for developing their training initiatives. Key points include:

- training everyone engaged in research on policy interpretation and applying policy to devise best practices;
- sustaining training to include updates as internal and external policies and procedures change;
- ensuring that new employees receive appropriate initial and continuing training;
- clearly defining roles and responsibilities, so content is customized to target
audiences; and

◆ establishing an institution-wide blueprint for communication.

Appropriate management of sponsored activities is a stated federal government priority and expectation, both among recipients and within federal agencies. Most recently, grant management training has become a focal point for the Chief Human Capital Officers Council (http://www.chcoc.gov/index.aspx) which aims to serve “a highly qualified, well-trained workforce with the right set of skills for the missions.” The Council is working with stakeholders to ensure that the federal workforce responsible for managing grants has uniform knowledge, core competencies, training, and proficiency standards. A competency chart guides the Council in developing and delivering grant management training to the federal community. (http://www.chcoc.gov/Transmittals/TransmittalDetails.aspx?TransmittalID=2515).

This federal interest in appropriately training internal staff is being mirrored throughout the recipient community as well.

A concrete impetus for training at the institutional level is the increased emphasis on transparency and accountability that often translates into more numerous audits. Institutions are seeing an expanded number of focused audits beyond the annual A-133 requirement. Stimulus funding, awarded under the American Recovery and Reinvestment Act of 2009 (www.Recovery.gov), heightened emphasis on accountability and performance, bolstered by additional federal requirements. Meanwhile, the Government Accountability Office (GAO) and certain congressional committees continually monitor the sponsored programs process for ways to conserve federal funds and ensure productivity in the research enterprise. This “perfect storm” of shrinking dollars and increased vigilance is prompting many universities to consider how well their faculty and grant management staff are trained in financial compliance and oversight. They have only to look at audited peer institutions for cautionary tales.

Another justification for grant management training programs is the growth of qui tam lawsuits. An individual who observes potential violations in managing federal awards (deemed to be “false claims”) can bring such a suit on behalf of the federal government and may receive 15–30% of the damages recovered. On May 20, 2009, President Obama signed legislation containing a number of significant amendments to the False Claims Act (FCA); several of these strengthened whistleblower or qui tam actions. Many institutions believe that these actions can be avoided by well-trained and knowledgeable personnel and a well-communicated internal escalation process for compliance concerns.

How should institutions weigh their compliance management risks and create the training programs necessary to offset potential problems? Many monitor audits of peer institutions for insights into compliance and conduct internal audits and institutional risk monitoring. The National Council of University Research Administrators (NCURA; www.ncura.edu), Council on Governmental Relations (COGR; www.cogr.edu), and the Society of Research Administrators International (SRA; www.srainternational.org) are good sources of information; in particular, NCURA’s
Regulation and Compliance 2014: A Compendium of Regulations and Certifications Applicable to Sponsored Programs (http://www.ncura.edu/PublicationsStore/ProductInfo.aspx?productcd=40675-037) and Report on Research Compliance (www.reportonresearchcompliance.com) are current reference tools. In addition, an excellent audit analysis tool is prepared by Charlene Blevens, University of Miami, on an annual basis (http://www.costaccounting.org/audits.html) as a service to the research management community.

Many institutions develop their own in-house monitoring/oversight teams to identify potential high risk areas and then create training classes to address these potential weaknesses. The University of North Carolina system has developed a comprehensive process for assessing compliance risks throughout its multiple campuses.

Reason #2: Improve Service and Support to Faculty

Colleges and universities rely on external support to sustain and to expand their research activities. Their success helps them to compete for students, faculty, and national recognition. Under increased pressure to submit proposals even as they manage current projects, faculty frequently express the need for informed support staff to relieve their administrative burden. The recent FASEB/NSB/FDP Survey on Administrative Burden confirmed this need: 83% of respondents were principal investigators (PIs); most had NIH funding and worked at institutions with medical schools. Those with active federal projects spent an estimated 42% of their time in meeting federal requirements. They indicated that addressing the many tasks that comprise the grant life cycle posed their greatest administrative burden. Suggested improvements included standardization of requirements, regulations, and information input methods and more flexible effort reporting, spending plans, and funding mechanisms.

The process of proposal development and submission has never been easy for academicians. With the advent of electronic research administration, guidelines and submission standards have been in a state of flux. Sponsors now prioritize collaborative projects that require complex coordination of submission elements. Faculty often feel challenged to stay current in this evolving grant world, and most rely on either central office staff or departmental research administrators to develop and submit budgets, various types of abstract, biosketches, subcontracts, consulting agreements, and/or data management plans, not to mention the proposal.

Once a project is funded, sound fiscal management is essential, but faculty rarely have the experience or expertise. They are focused on their research and teaching. Larger universities generally employ departmental grant managers, who serve as dedicated support staff to ensure that the project remains on budget, reconciliation and adjustments are done on time, and charges are consistent with sponsor and institutional policies. Departmental grant managers are charged with interpreting rules and regulations for their assigned faculty and may be challenged to demonstrate their knowledge of policy and process on a regular basis. Without skilled support staff, researchers are hard pressed to remain competitive. Training support personnel to facilitate proposal submission and manage funded projects is an es-
sential element of the institution’s strategy for building and sustaining its external funding base.

In less research-intensive institutions, central office staff may provide these services, or they may be performed directly by faculty who have little experience with sponsor fiscal requirements. Training in post-award functions, fiscal management, sponsor rules and regulations, policies and program guidelines is critical to faculty support and compliance management.


Significant changes in how sponsored programs are developed, submitted, and managed generally follow major sponsor policy and process revisions. The implementation of new technologies and systems, like Grants.gov or program progress reporting may mandate the development and deployment of new or upgraded grant submission and management systems. Constantly evolving sponsor regulations and guidance may prompt the deployment of internal policies and processes developed in response. Clearly institutions throughout the nation will have to revise and update their internal policies and processes to address the new uniform guidance issued by OMB. The institutional burden to address such significant change will likely require training for grant management personnel, and increased communication to all aspects of the research community.

**Reason #4: Maintain a Skilled Workforce**

Underlying all of these challenges are two basic requirements: training newly hired personnel and keeping current personnel up to date. Throughout academia, the need to support and to improve services to maintain or to grow research endeavors drives both emerging and mature training programs. Typically, institutions with small research volume do not have extensive departmental research administration structures, and training focuses on central office staff who help PIs to submit and to manage their own projects.

The close relationship between grant managers and faculty make personnel transition in research administration a serious concern. The demand for skilled grant managers has significantly increased over the past several decades. The challenge to find such highly skilled individuals is compounded by the scarcity of formal degree programs that prepare individuals for a career in research administration. Research Administration is a growing international profession, complete with a recognized body of knowledge, professional credentialing through a national testing and validation program, and emerging academic degree programs. Currently there are four formal degree programs: the University of Central Florida’s Master of Research Administration; Emmanuel College’s Master of Science in Management with specialization in Research Administration; Johns Hopkins University’s Master of Science in Research Administration; and Rush University Medical Center’s Master of Science in Research Administration.

As vital as these emerging programs may be, they provide the foundational knowledge that must be customized to specific institutional dynamics. Thus, hist-
torically almost all research administration training related to the internal processes of the institution is done in-house and on-the-job.

Developing an in-house training program from scratch can be a formidable challenge. Fortunately, NCURA provides an extensive menu of meetings, training conferences, webinars, online tutorials, on-site workshops, and publications in support of the research administration professional. Other professional associations, such as SRA International, also provide training opportunities. Many institutions find these programs of benefit, especially when supplemented with training specific to their own policies and systems. When matched to internal processes and policies, external training can be an effective springboard for baseline preparation of in-house grant managers.

**Summary: Focus on Why**

The rapid growth of electronic requirements for sponsored program submissions, changes driven by technology and information systems, and the expansion of regulations and regulatory oversight have prompted exponential growth in training and professional development programs for faculty and research managers.

An essential element in designing and deploying these programs is a clear understanding of why the institution needs them, as outlined in Figure 1105.1-1. Understanding why is the basis for all future decisions about training development.

**Figure 1105.1-1. Reasons for Training**
1105.2 Creating Institutional Buy-In

Institutions tend to support research administration training programs based on their perceived needs and outcome expectations. College and university leaders expect a return on the resources and faculty/staff time invested in training. Generally, these expectations are directly related to the rationale for creating the training programs. As institutions plan and implement training, its content, delivery, and evaluation should always be tied to expected outcomes.

Institutions that have developed training initiatives often report that having buy-in from their leadership was essential to achieving success. Consider the following: Is the proposal submission process improved? Do faculty feel better supported in the management of their funded projects? Are system and policy changes adopted with minimal revision or need for technical assistance? Are there improvements (both perceived and documented) in compliance?

First, Conduct an Assessment

The creation of mandatory training at Duke University demonstrates the importance of institutional buy-in. In 2004, Duke wanted to know the current state of its growing grant management and compliance structure, and to create a vision for where it should be in order to remain competitive and compliant.

An external assessment provided credibility and a fresh, impartial comparison to other institutions on a national scale. A task force charged with implementing task force recommendations piloted program development within the Financial Services division in conjunction with the pre-award offices. Senior management stakeholders endorsed this approach based on clearly stated expected outcomes, and follow-up meetings discussed process, objectives, training plan, roles, and responsibilities before the program was implemented.

The process is ongoing. As Duke’s grant management base changed, the program was significantly revised in 2007 and again in 2014. Mandated by senior leadership, training now supports technological advances, policy and process development and deployment, and a cadre of specifically affiliated grant managers whose performance is monitored according to metrics and analyzed.

Other institutions have embarked on similar paths. Emory developed a strong partnership between Human Resources and Research to identify mechanisms to “pod,” or “regionalize”, their research support structures. Like Duke, Emory requires grant management personnel to become certified in institutional processes and compliance.

The NCURA Peer Review Program is an excellent assessment mechanism. While not designed specifically to identify training needs, this comprehensive service provides an intensive analysis of the institution’s capacity to support and manage research. Institutions can derive a wealth of useful information from the Peer Review report, including identification of areas where training would be an asset or even a necessity. See http://www.ncura.edu/InstitutionalPrograms/PeerReview/PeerReviewProcess.aspx
See Problems as Opportunities

Sometimes adverse events present opportunities for improvement. Troubling audits and faculty feedback on perceived needs can prompt training interventions to remediate problems and strengthen skill levels among support personnel. An institution-wide initiative to increase sponsored program funding can be logically linked to training that supports faculty in seeking grant and contract opportunities. The creation of new policies, processes, technologies, and systems present opportunities to suggest new or enhanced training to senior leadership.

While leadership buy-in is a major component of a successful training program, buy-in and active participation of collaborating offices and end-users are also essential. At institutions with many grant managers, participation/graduation from in-house training programs is often seen as a résumé builder, and verification that skills and knowledge specific to the institution have been acquired. Some institutions require staff to complete training; others may make the training optional, while some may provide salary or supplemental pay incentives.

Is institutional training best accomplished by a single office? While there has been a steady growth in units dedicated solely to training, or associated with monitoring and metrics related to performance measurements, still others feature collaboration among a variety of university offices in developing training content. Whatever the approach, effective training requires a comprehensive menu of offerings that includes both content and interpretations from several perspectives. There are some training programs that incorporate trainers who are themselves research administration practitioners. They may be departmental personnel who clearly understand the day to day activities that departmental personnel encounter and can this provide a realistic perspective. In such a collaborative setting, all units benefit by developing skill sets among current personnel and assuring that other constituencies are aware of the institution’s rules and requirements.

Other institutions create training offices directly tied to an overall research management organization, so trainers become early participants in policy and process discussions and can provide feedback on questions that should be addressed at the central office level.

Summary: Focus on Outcomes First

Buy-in and active endorsement of training initiatives should be developed on the basis of outcomes and benefits to the institution, the collaborating partners, consumers (faculty), and research management personnel. As these outcomes are defined, they will provide a framework for content, who should be trained, and other similar considerations (see Figure 1105.2-1).
Figure 1105.2-1: Defining ‘Outcomes’

- Compliance management as evidenced in audits and monitoring
- Improved processes for proposal submission/increased faculty satisfaction
- Adoption/Application of policy, process and systems
- Retention/Improved performance by skilled personnel


Who Should Be Trained?

The next logical step in building a training program is to define recipients. Research administration is practiced in many venues with diverse functions. As NIH suggests, institutions should develop and/or update their “roles and responsibilities”, which are essential in identifying not only who should be trained but also what the training content should be.

Examples of “roles and responsibilities” (R/R’s) grids may be found at many colleges and universities. For example, the University of Minnesota not only defines R/R’s but their constituent layers of accountability:

Responsibility is defined as the authority to make a decision and be accountable for any outcomes associated with that decision. To the extent possible responsibility is maintained locally so that decisions are made by individuals with the best information. Oversight is always distinct from the operating unit that makes the decisions. See www.research.umn.edu/regulations/sproles.html.

By further defining responsibility and related oversight, Minnesota provides a framework for distinct roles and differentiated training. Its comprehensive website includes resources, guidance, and other critical links in support of its training initiatives, and it has also developed and implemented a certification process designed to provide targeted training through core learning and electives. See http://www1.umn.edu/ohr/trainingservices/spa/spectrum/index.html.

When Duke University revised its training program in 2014, the change focused on providing core knowledge and function competencies that all research administrators should know. It then developed a “decision matrix” to enable supervisors to identify the functions specific to each grant manager. The matrix allows managers to select “electives” that most closely match the skills and knowledge needed to perform each function. Harvard University has developed a very similar document (http://osp.fad.harvard.edu/sites/osp.fad.harvard.edu/files/attachments/73/basicsponsoredadministrationtrainingguidelinesdec2012.pdf) that guides both the research administrator and the supervisor in the selection of appropriate classes and training venues.

Build Training Around Organizational Structure

In addition to identifying individual tasks and levels of responsibility and accountability, training should vary with the overall administrative organization. Many universities employ service providers in academic departments who perform both pre- and post-award functions. They should logically receive training in both areas. Other institutions have separate pre- and post-award central offices whose staffs require a slightly different training approach, as they often must opine on the approval of a submission or a charge to a funded project. While they are clearly providing a service to the institution, their role is somewhat different than those who assist in proposal development and project management at the grassroots level. Still other institutions have created “pods” or “research service” areas dedicated to a “cradle to grave” approach in support of the faculty they serve. The training for these personnel may have to be specifically customized to their respective clientele, or broad-
ened beyond the traditional research administration functions that are the standards for most training programs.

**Keep the Audience in Mind**

However the institution defines its training cohort(s), the content thus delivered must consider their respective functions and levels of responsibility. As noted in Figure 1105-3, many successful training programs go beyond the traditional focus on grant managers or central office staff. A thorough review of roles and responsibilities often reveals other audiences in need of training and information. For example, who makes decisions on whether certain charges can be allocated to a sponsored project? What role do faculty play in these decisions? Are they made by laboratory managers with no training in compliance? Are they made remotely by central offices with little knowledge of day-to-day research activities? These questions reveal audiences well beyond those typically targeted for in-house training programs.

**Summary: Satisfy the Audience’s Needs**

Good training requires targeting the audience and developing content specific to its needs to produce results directly related to anticipated outcomes. Figure 1105.3-1 posits a model for identifying “who should be trained.”

**Figure 1105.3-1. Who Should Be Trained?**

[Diagram showing categories: Compliance, Support to Faculty, Adoption of new processes, etc.]
1105.4 What Should Be Taught?

The training curriculum should grow directly from the participants’ roles and responsibilities as well as from the expected outcomes for the institution. Most training programs adopt fundamental research administration concepts, outlined in NCURA’s highly respected national traveling workshops (see http://www.ncura.edu/Education/TravelingWorkshops.aspx).

NCURA provides a broad variety of training and professional development initiatives. Many are extremely cost-effective and can be delivered both in-person and online, including multi-week tutorials and topic-specific webinars. See http://www.ncura.edu/Education.aspx.

Another source of basic content is the Society of Research Administrators’ Body of Knowledge, “a topical index to information, articles, resources and links essential to successful research management on all levels. Produced and maintained by expert research administrators from around the world, this comprehensive ‘living library’ of essential resources contains in-depth information on the six main categories of research administration.”

Less detailed Body of Knowledge matrices can be found on the Research Administrators Certification Council website. They are the basis of the national Certified Research Administrator (CRA) examination, a national proficiency test that many institutions use as an indicator of broad knowledge in research administration practice and policy (http://www.cra-cert.org/CRAbodyofknowledge.html)

The recent Pre-award Research Administrators’ Body of Knowledge focuses on pre-award knowledge only. (http://www.cra-cert.org/CPRAbodyofknowledge.html).

Workshops and program sessions at NCURA, SRA national meetings, and the various regional and chapter meetings of each organization are excellent sources of content. Federal briefings and updates are also useful. The NIH website has a broad array of helpful information that can easily be transferred to in-house training programs, while the National Science Foundation (NSF) periodically conducts outreach and webinars on compliance and program information.

A wealth of training material is readily available on the web and through professional organizations. Some institutions develop programs in conjunction with NCURA, SRA, and/or federal and private sponsors. The external resource provides generic information and the host institution translates it to its own operations. NCURA’s popular webinar and DVD series can be delivered directly to the institution and used to follow-up on discussions specific to institutional operations and policies.

Build the Program ‘Backwards’

Most successful programs build backwards — they consider what a successful graduate should know in order to meet institutional outcomes and performance expectations and then create a curriculum or a curricular approach that meets these standards. They build a framework that considers the need for the training,
the expectation of changes in performance or compliance that will result, and the impact the training will have on participants (rewards, recognition, and retention) and those they support. Some schools have created a general training framework that focuses on fundamentals and “on-the-job” training to provide the specific skills relative to the position and unit. Others combine policy, process, and training in a comprehensive approach.

**Keep Content Fresh**

Content and delivery should be continuously reviewed and refreshed. Most training initiatives have mechanisms to update their standard content by modifying and adding regulatory changes, new/updated processes or changes in policy. These updates may take many forms: brown bag lunches, web updates, and presentations at department meetings. These sessions disseminate “hot topics” quickly and broadly.

Training content is never static. To anticipate and reflect changes in research administration processes, training program managers should consider recent audits of peer institutions, important notices from sponsors, and internal developments, such as new systems and policies.

The NCURA YouTube Tuesday series (https://www.youtube.com/user/ncura1959) is fun and a highly effective way to communicate important topics.

A cautionary issue in this changing training environment is how to ensure that all research administrators have received the most up-to-date information. A class taken months ago may have been modified to include new information.

**Tailor the Training to the Institution**

Whenever possible, training content should be connected to the unique aspects and needs of the institution (see Figure 1105.4-1). What do your faculty say they need from their research administrators? What input from the Internal Audit unit and/or internal monitoring points to potential problems? Should training developers consider input from Human Resources when considering the rewards, recognition, and retention strategies of their training design? How will new systems or processes affect the roles/responsibilities that affect training requirements?

All of these perspectives should inform the content and outcome of emerging training programs and contribute excellent feedback on existing programs.
Focus on Roles & Responsibilities

As mentioned earlier, the first step in developing training content might be to review the institutional roles and responsibilities (R/R’s) associated with research administration. Note that institutions typically develop roles and responsibilities for managing compliance, but defining them by grant management function is also worthwhile. By matching these sets of performance expectations, institutions can develop comprehensive learning outcomes oriented to job performance and compliance management. Determine whether institutional job descriptions provide insight into the performance expected of research administrators at various levels sufficient to develop content.

If the correlation is not direct, then a more subjective approach might convene a group of end-users — faculty, senior departmental personnel, and central office leadership — to define what knowledge and proficiencies they expect at various levels of research administration. Ask them: Should these proficiencies be attained through training or a combination of training and on-the-job development? How should the trainee demonstrate proficiency over time? Does any logical progression correspond with HR levels? The benefits of developing a matrix are twofold: it can be used to measure learning attained through training and to provide a baseline for content. An example of a learning assessment matrix from Duke University is noted in Figure 1105.4-2. It can be found at http://finance.duke.edu/research/training/certificate/raa/ElectiveMatrix.pdf
Figure 1105.4-2. Duke Learning Assessment Matrix

Research Administration Academy Elective Decision Matrix

Instructions:

The matrix below should be used by supervisors and staff members when selecting electives for the Research Administration Academy (RAA) Certificate Program. At least four electives are required. The first column lists competencies/job skills your employee may be doing. If s/he is performing that skill, check the box. Core (required) courses where the material will be covered are in the second column. The third column lists the electives available. Only classes included in the RAA elective column count towards the Elective requirement for the RAA Certificate program. The recommended complimentary courses are not eligible to count as electives for the RAA certificate. They are courses that may be valuable to your employee if s/he is performing that duty/function.

*Classes listed with an asterisk are currently in development.

After reviewing the matrix, select at least four electives. Both supervisor and employee signature are required.

If competency is covered in more than one class, the primary source of information is **bold**.

<table>
<thead>
<tr>
<th>Financial Compliance Duties</th>
<th>Core Courses (Required)</th>
<th>Recommended RAA Electives</th>
<th>Recommended Complimentary Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected Training Outcome:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic understanding of rules, regulations governing sponsored programs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other basic competencies as defined by selected electives</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

L&OD offers training in computer technology, as well as professional development training such as Managing Multiple Priorities and Project Management fundamentals which may benefit an employee with pre-award responsibilities. These classes do not count as RAA Electives or for continuing education credit at this time. A complete list of L&OD Course offerings can be found here: [http://www.hr.duke.edu/training/workshops/index.php](http://www.hr.duke.edu/training/workshops/index.php)

- [ ] Understand the basic concept of compliance, and costs associated with non-compliance
  - Basic Compliance Online
  - Pre-Award Fundamentals
  - Regulatory Environment - AGM

- [ ] Know to whom to report fraudulent and non-fraudulent compliance issues
  - Basic Compliance Online

- [ ] Familiarity with the life cycle of a sponsored program and ability to identify functions and responsibilities of each step in the life cycle
  - Research Mgmt@Duke Online
  - Pre-Award Fundamentals

- [ ] Familiarity with the roles and responsibilities of the offices responsible for monitoring financial compliance at Duke, as well as the roles and responsibilities of the PI and financial administrators
  - Research Mgmt@Duke Online
  - Pre-Award Fundamentals

- [ ] Understand the order of precedence in relation to rules/regulations governing research management
  - Pre-Award Fundamentals
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<td>Proposal/budget development/submission</td>
<td></td>
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<tr>
<td>Working knowledge of University systems, which may include SPS, SAP, SES; basic knowledge of Duke financial systems, policies and processes</td>
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<td></td>
</tr>
<tr>
<td>Other basic competencies as defined by selected Electives</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>□ Basic concepts set forth in the OMB Circulars and which ones apply to Duke</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td>Regulatory Environment - AGM</td>
</tr>
<tr>
<td>□ Understand and apply principles of allowability, allocability, reasonableness, and consistency to budget development</td>
<td>Basic Compliance Online</td>
<td></td>
<td>Regulatory Environment - AGM</td>
</tr>
<tr>
<td>□ Basic knowledge of Duke University GAPs content, purpose and primary directive</td>
<td>Basic Compliance Online</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Understand FAR clauses, when they apply, and how to negotiate</td>
<td>ORA Federal Contracting: FAR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Understand FISMA compliance</td>
<td>ORA Federal Contracting: FISMA (IT Security)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Effectively communicate pre-award requirements to PI</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Understand and follow requirements of Broad Agency Announcements, Requests for Proposals, Requests for Applications, and explain to PI</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Differentiate between various award mechanisms</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>□ Locate sources of funding</td>
<td>GCC 101 (ORS)</td>
<td></td>
<td>Finding Funding (ORS)</td>
</tr>
<tr>
<td>Financial Compliance Duties</td>
<td>Core Courses (Required)</td>
<td>Recommended RAA Electives</td>
<td>Recommended Complimentary Courses</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------</td>
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<tr>
<td>Expected Training Outcomes:</td>
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<tr>
<td>Proposal/budget development/submission</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Working knowledge of University systems, which may include SPS, SAP, SES; basic knowledge</td>
<td></td>
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</tr>
<tr>
<td>of Duke financial systems, policies and processes</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Other basic competencies as defined by selected Electives</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Identify key information, including required submission documents, in funding announcements</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Skill Development: GC 101/201 (SOM/SON)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GCC 101, 102, 103 (Campus)</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Understand the elements of a budget</td>
<td>Pre-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare budgets</td>
<td>Core Skill Development: GC 101/201 (SOM/SON)</td>
<td></td>
<td>Excel levels 1-3 (L&amp;OD)</td>
</tr>
<tr>
<td>GCC 101, 102, 103 (Campus)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recognize need for cost-sharing in guidelines and account for it in proposal budget</td>
<td>Core Skill Development: GC 101/201 (SOM/SON)</td>
<td></td>
<td>Excel Levels 1-3 (L&amp;OD)</td>
</tr>
<tr>
<td>GCC 101, 102, 103 (Campus)</td>
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</tr>
</tbody>
</table>
### Pre-Award Duties

**Expected Training Outcomes:**
- Proposal/budget development/submission
- Working knowledge of University systems, which may include SPS, SAP, SES; basic knowledge of Duke financial systems, policies and processes
- Other basic competencies as defined by selected Electives

L&OD offers training in computer technology, as well as professional development training such as Managing Multiple Priorities and Project Management fundamentals which may benefit an employee with pre-award responsibilities. These classes do not count as RAA Electives or for continuing education credit at this time. A complete list of L&OD Course offerings can be found here: [http://www.hr.duke.edu/training/workshops/index.php](http://www.hr.duke.edu/training/workshops/index.php)

<table>
<thead>
<tr>
<th>Pre-Award Duties</th>
<th>Core Courses</th>
<th>Recommended RAA Electives</th>
<th>Recommended Complimentary Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calculate effort components for a budget</td>
<td>Core Skill Development: GC 101/201 (SOM/SON) GCC 101, 102, 103 (Campus)</td>
<td>Excel Levels 1-3 (L&amp;OD)</td>
<td></td>
</tr>
<tr>
<td>Enter SPS data</td>
<td>Core Skill Development: GC 101/201 (SOM/SON) GCC 101, 102, 103 (Campus)</td>
<td>SPS (RAA Pre-requisite)</td>
<td></td>
</tr>
<tr>
<td>Calculate F&amp;A including understanding different F&amp;A bases</td>
<td>Pre-Award Fundamentals Core Skill Development: GC 101/201 (SOM/SON) GCC 101, 102, 103 (Campus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Account for matching funds in SPS budget</td>
<td>Core Skill Development: GC 101/201 (SOM/SON) GCC 101, 102, 103 (Campus)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Understand/Prepare MOUs, PSAs, or IPAs</td>
<td>MOUs, PSA’s, and IPAs (ORA)</td>
<td></td>
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</tr>
<tr>
<td>Meet Public Access Policy obligations</td>
<td>MC Library Public Access Course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Work with other Duke or non-Duke entities on subcontracts including: negotiating contract or subcontract terms, entering subcontractor into SPS</td>
<td>Pre-Award Subrecipient Management * (ORA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotiate a subcontract with a foreign site</td>
<td>Collaborating with Foreign Partners*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare Other Support and/ or reconcile Other Support issues</td>
<td>Other Support (ORA) Post Award Effort Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assist with submitting electronic applications via grants.duke, proposal central, eRA Commons</td>
<td>Pre-award Fundamentals (awareness only) Core Skill Development: GC 101/201 (SOM/SON) GCC 101, 102, 103 (Campus)</td>
<td>eSubmission</td>
<td></td>
</tr>
<tr>
<td>Prepare and submit training awards and fellowships</td>
<td>Management of training and career awards - AGM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-Award Duties</td>
<td>Core Courses</td>
<td>Recommended RAA Electives</td>
<td>Recommended Complimentary Courses</td>
</tr>
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<tr>
<td>Expected Training Outcomes:</td>
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<td></td>
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<tr>
<td>Proposal/budget development/submission</td>
<td></td>
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<tr>
<td>Working knowledge of University systems, which may include SPS, SAP, SES; basic knowledge of Duke financial systems, policies and processes</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Other basic competencies as defined by selected Electives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prepare and complex research projects (multi-site, multi-PI)</td>
<td>Core Skill Development: GC 101/201 (SOM/S0N) GCC 101, 102, 103 (Campus)</td>
<td>Management of Complex Research Projects - AGM</td>
<td></td>
</tr>
<tr>
<td>Respond to JIT requests</td>
<td>Pre-Award Fundamentals Core Skill Development: GC 101/201 (SOM/S0N) GCC 101, 102, 103 (Campus)</td>
<td>Award Setup</td>
<td></td>
</tr>
<tr>
<td>Request pre-award spending or fund codes in advance</td>
<td>Differentiate between vendor and subrecipient Pre-Award Fundamentals Core Skill Development: GC 101/201 (SOM/S0N) GCC 101, 102, 103 (Campus)</td>
<td>An Overview of Procuring Goods and Services for Duke managers (Financial Services) The Independent Contractor Checklist Online Video</td>
<td></td>
</tr>
<tr>
<td>Submit non-competing renewals</td>
<td>Core Skill Development: GC 101/201 (SOM/S0N) GCC 101, 102, 103 (Campus)</td>
<td>RPPR</td>
<td></td>
</tr>
<tr>
<td>Prepare and submit federal contracts</td>
<td>Core Skill Development: GC 101/201 (SOM/S0N) GCC 101, 102, 103 (Campus)</td>
<td>Federal Contracting Basics (ORA)</td>
<td></td>
</tr>
<tr>
<td>Build and negotiate a budget for an industry-sponsored clinical trial</td>
<td>Clinical Trial Budget Development and Negotiation (DOCR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Build a budget in response to a federal contract RFP</td>
<td>Building a Budget - Federal Contracting (ORA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respond to a federal contract KHP</td>
<td>Responding to a federal Contract KHP (ORA)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-Award Duties</td>
<td>Core Courses</td>
<td>Recommended RAA Electives</td>
<td>Recommended Complimentary Courses</td>
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<tr>
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</tr>
<tr>
<td>Review and interpret terms and conditions in Notice of Award</td>
<td>Post-Award Fundamentals</td>
<td>Award Setup</td>
<td></td>
</tr>
<tr>
<td>Review and revise budget as necessary</td>
<td>Post-Award Fundamentals</td>
<td>Award Setup</td>
<td></td>
</tr>
<tr>
<td>Manage prior-approval process: reduction in effort, rebudgeting, etc.</td>
<td></td>
<td>Award-Setup Making Adjustments to Sponsored Projects</td>
<td>iForms Overview eRA@Duke Rebudgeting/ CAS form</td>
</tr>
<tr>
<td>Communicate charging rules to PI and lab</td>
<td>Post-Award Fundamentals</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor effort and move faculty and staff to new funding</td>
<td>Post-Award Fundamentals</td>
<td>Post Award Effort Management</td>
<td>ECRT Coordinator/ Certifier training</td>
</tr>
<tr>
<td>Prepare iForms and Cost Distribution Changes</td>
<td></td>
<td>Post Award Effort Management</td>
<td>iForms Overview ECRT Coordinator/ Certifier training</td>
</tr>
<tr>
<td>Calculate and implement cost sharing</td>
<td></td>
<td>Post Award Effort Management</td>
<td>ECRT Coordinator/ Certifier training</td>
</tr>
</tbody>
</table>

Expected Training Outcomes:
- Working knowledge of University systems, which may include SPS, SAP, SES; basic knowledge of Duke financial systems, policies and processes
- Manage basic budgets including reconciliation, making adjustments (cost transfers, rebudgets, CAS, etc.) and effort management
- Performs closeout of assigned portfolio
- Basic knowledge of export controls
- Other basic competencies as defined by selected Electives

L&OD offers training in computer technology, as well as professional development training such as Managing Multiple Priorities and Project Management fundamentals which may benefit an employee with post-award responsibilities. These classes do not count as RAA Electives or for continuing education credit at this time. A complete list of L&OD Course offerings can be found here: [http://www.hr.duke.edu/training/workshops/index.php](http://www.hr.duke.edu/training/workshops/index.php)
<table>
<thead>
<tr>
<th>Post-Award Duties</th>
<th>Core Courses</th>
<th>Recommended RAA Electives</th>
<th>Recommended Complimentary Courses</th>
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</thead>
<tbody>
<tr>
<td>Expected Training Outcomes:</td>
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<tr>
<td>Working knowledge of University systems, which may include SPS, SAP, SES; basic</td>
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<tr>
<td>knowledge of Duke financial systems, policies and processes</td>
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<tr>
<td>Manage basic budgets including reconciliation, making adjustments (cost transfers,</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>rebudgets, CAS, etc.) and effort management</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Performs closeout of assigned portfolio</td>
<td></td>
<td></td>
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<tr>
<td>Basic knowledge of export controls</td>
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<td></td>
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<tr>
<td>Other basic competencies as defined by selected Electives</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage complex TPE scenarios</td>
<td></td>
<td>Advanced Effort Management</td>
<td></td>
</tr>
<tr>
<td>Manage complex summer salary scenarios</td>
<td></td>
<td>Advanced Effort Management</td>
<td></td>
</tr>
<tr>
<td>Manage multiple salary caps</td>
<td></td>
<td>Advanced Effort Management</td>
<td></td>
</tr>
<tr>
<td>Reconcile payroll and/or non-payroll expenditures to a grant</td>
<td>Post-Award Fundamentals</td>
<td>Reconciliation of Sponsored Projects</td>
<td>SAP Journal Entry</td>
</tr>
<tr>
<td>including identifying allowable and unallowable expenses</td>
<td></td>
<td></td>
<td>SAP Non-Salary Cost Transfer</td>
</tr>
<tr>
<td>Monitor burn rate, spending trends</td>
<td>Post-Award Fundamentals</td>
<td></td>
<td>SAP Reconciliation and Documents</td>
</tr>
<tr>
<td>Forecast/Project expenses</td>
<td>Post-Award Fundamentals</td>
<td></td>
<td>Advanced Sponsored Project Reporting</td>
</tr>
<tr>
<td>Prepare CAS and rebudget forms</td>
<td>Post-Award Fundamentals</td>
<td>Making Adjustments to Sponsored Projects</td>
<td>eRA@Duke Rebudgeting/ CAS form</td>
</tr>
<tr>
<td>Prepare and justify cost transfers</td>
<td>Post-Award Fundamentals</td>
<td>Making Adjustments to Sponsored Projects</td>
<td>SAP Journal Entry; SAP Non-Salary Cost Transfer</td>
</tr>
<tr>
<td>Request a no-cost extension</td>
<td></td>
<td>Making Adjustments to Sponsored Projects</td>
<td></td>
</tr>
<tr>
<td>Prepare amendments to contracts/subcontracts</td>
<td>Post-Award Subrecipient Management*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monitor subaward spending</td>
<td>Post-Award Subrecipient Management*</td>
<td></td>
<td>Excel levels 1-3 (L&amp;OD)</td>
</tr>
<tr>
<td>Review invoices from subcontracting sites</td>
<td>Post-Award Subrecipient Management*</td>
<td></td>
<td>APCR – Financial Services</td>
</tr>
<tr>
<td>Close out projects: resolve overdrafts, review and certify financial reports,</td>
<td></td>
<td>Steps in Closeout</td>
<td></td>
</tr>
<tr>
<td>complete documents for NCE and renewal</td>
<td></td>
<td></td>
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<tr>
<td>Provide information on disposition of equipment</td>
<td></td>
<td>Steps in Closeout</td>
<td>Federal Contracting: Government-Owned Property (ORA/OSP)</td>
</tr>
<tr>
<td>Provide final invention report</td>
<td></td>
<td>Steps in Closeout</td>
<td></td>
</tr>
<tr>
<td>Post-Award Duties</td>
<td>Core Courses</td>
<td>Recommended RAA Electives</td>
<td>Recommended Complimentary Courses</td>
</tr>
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<td>---------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Execute ZF114, checklist, obligation worksheet</td>
<td>Steps in Closeout</td>
<td>University Reporting: Sponsored Projects (RAA Pre-Requisite)</td>
<td></td>
</tr>
<tr>
<td>Notify PI to complete final scientific report</td>
<td>Steps in Closeout</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic understanding of export control concerns in research administration</td>
<td>Introduction to Export Controls</td>
<td>Advanced Export Controls</td>
<td></td>
</tr>
<tr>
<td>Assist in relinquishing grants to other institutions</td>
<td></td>
<td>ORA Relinquishing Guide</td>
<td></td>
</tr>
<tr>
<td>Assist with transferring grants to Duke</td>
<td></td>
<td>ORA Transfers Guide</td>
<td></td>
</tr>
<tr>
<td>Understand the different management requirements for industry clinical trials and grants</td>
<td>Managing Clinical Trials: An Overview (DOCR)*</td>
<td></td>
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</tr>
<tr>
<td>Prepare invoices for clinical trials</td>
<td>Financial Mgmt. Strategies for Clinical Research (DOCR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Track accounts receivable for clinical trials</td>
<td>Financial Mgmt. Strategies for Clinical Research (DOCR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collaborate with OCRC on subcontracts/amendments</td>
<td>Financial Mgmt. Strategies for Clinical Research (DOCR)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Manage contracting terms (severability/COR/COA)</td>
<td>Federal contracting Basics (ORA)</td>
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<tr>
<td>Manage small business and minority-owned FAR requirements in a federal contract</td>
<td>Small Business Subcontracting (ORA)</td>
<td></td>
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</tr>
<tr>
<td>Manage rebudgeting, cost transfers, and salary on a federal contract</td>
<td>Post-Award Contract Management (ORA)</td>
<td>Rebudgeting and Other Financial Considerations on Federal Contracts (ORA)</td>
<td></td>
</tr>
<tr>
<td>Provide appropriate reporting on a federal contract</td>
<td>Federal Contracting Basics (ORA)</td>
<td>Federal Contract Reporting (ORA)</td>
<td></td>
</tr>
<tr>
<td>Manage subcontracts on a federal contract</td>
<td>Federal contracting basics (ORA)</td>
<td>Federal contracts: subcontracting (ORA)</td>
<td></td>
</tr>
</tbody>
</table>
1. Communication Skills
2. Time Management Skills
3. Customer Focus
4. Action-Oriented
5. Decision-Making Skills
6. Conflict Management

Supervisor Selected Electives (minimum four required):
1. 
2. 
3. 
4. 

*Note: Classes noted with an asterisk are in development*

Supervisor Pledge:

I am responsible for the day-to-day oversight and performance of the RAA applicant. I used the decision matrix to select appropriate electives to fulfill RAA certificate program requirements. Only the courses listed in the “RAA Electives” column count towards the elective requirement for an RAA certificate. Complimentary courses do not fulfill the electives requirement, but may be beneficial to your employee’s job performance. The selected electives best match the current or future duties of my employee in the certificate program. If, during the course of the certificate program, I feel the need to modify the electives above, I will contact both RCC staff and the employee. It may not be feasible to deviate from the selections above, and I agree to work with RCC staff for any amendments to the curriculum.

Signature ___________________________ Date ___________________________

Employee Pledge:

I agree to register for the electives selected for me by my supervisor. I am responsible for registering for electives in the LMS. If a scheduling conflict exists, or I find I am unable to complete the assigned electives in the prescribed timeframe, I will notify my supervisor and RCC staff immediately. I understand that neither RCC nor my supervisor is obligated to deviate from the selections above. I will complete the required courses within 12 months of enrollment in the RAA Certificate program.

Signature ___________________________ Date ___________________________
Training content may vary from basic research administration concepts to specific “hands-on” training directly related to institutional practices. Figure 1105.4-3 presents a basic model of training content that connects the expected outcome to the training provided.

![Figure 1105.4-3. Program Model](image)

Training can often provide a venue for economies of scale and improved processes. North Carolina State University (NCSU) has moved away from their original “retreat” approach where grant managers met for five days with central office staff to discuss a variety of grant management functions. Instead, it created a web portal for access to policies, process guidance, continuing education, and class registration. This model allows delegation of signature authority at the most distributed level reasonable, making the review and approval process on proposals and agreements far less bureaucratic and more value-added. In this environment, continuing education is critical, and NCSU has made it mandatory for all signatory delegates. At least annually, the signatory delegates hold a meeting to discuss what their signature represents, what the signatures of the PIs, department heads, and center directors represent, what the consequences of false or inappropriate representations are, and what challenges have been observed by central administration. Delegates’ signature authority is suspended if they fail to attend a continuing education session on the subject. See [http://research.ncsu.edu/sparcs/training/](http://research.ncsu.edu/sparcs/training/)
Consider the ‘Whole’ when Constructing the Program

In addition to content decisions, training developers should consider how the program will be constructed. Many institutions have opted for a combination of certificate programs and stand-alone classes, largely depending on the target audience. Duke University offers three progressive certificate programs supplemented by optional individual classes. For examples of such programs, see Figure 1105.5-4.

If an institution decides to offer and/or require a certificate program, certain HR considerations come into play. Mandatory training requires performance evaluations and carries career advancement implications. The institution’s HR policies must be considered when mandating training.

Figure 1105.5-4. Samples of Training Curricula

The following universities provide examples of training and training curricula for those seeking to develop and/or to refine their current programming.

Harvard University
http://osp.fad.harvard.edu/content/training

The University Research Administration Training Team (URATT) has developed a series of courses designed to cover basic information about the world of research administration at Harvard. This course series begins with the Overview of Sponsored Projects Administration course, and is complemented by a sequence of online courses. Research administrators looking to further their practical knowledge of the field may be interested in the Research Excellence in Administration Certificate at Harvard (REACH) program.

University of North Carolina at Chapel Hill
http://research.unc.edu/offices/sponsored-research/training/

The Tarheel Curriculum is a series of classes for staff who support the sponsored research enterprise at UNC-CH. The classes help them to build their competencies and knowledge with the overall goal of increasing efficiency and effectiveness in daily administration. Presented twice a year, this program is intended for any staff member who currently performs or expects to assume duties and responsibilities related to the administration of research contracts and grants. Both Level I and Level II certificates are offered.

University of Maryland
http://www.ora.umd.edu/sites/default/files/documents/training/certificate-program/certificate-program-policies.pdf

The Office of Research Administration (ORA) and the Office of Contract and Grant Accounting (OCGA) are committed to providing guidance to the university community on Federal, State, and University policies and regulations for sponsored research. To enhance this effort, the two offices have combined to offer a series of courses, each intended to give a deeper understanding of a specific aspect of con-
tract and grant administration. Courses may be taken in any order, and participants may choose to take as many or as few as they like. Completion of module quizzes and attendance at all 14 lectures is mandatory to receive a certificate in sponsored project management. Course modules are offered at least once a year.

University of South Carolina
http://grant.sc.edu

Gamecock Research Administrators Network Training (GRANT) is a “comprehensive training program developed to meet the research administration needs of University of South Carolina faculty and staff.” Launched in 2005, it provides a deeper understanding of regulations, policies, and procedures; a fundamentally more unified and streamlined sponsored projects system; and access to vital resources and contacts for further assistance. The program has expanded to include faculty assistance and programming, on-line access to modules, and similar enhancements.

Stanford University
https://doresearch.stanford.edu/training

Stanford developed one of the first comprehensive training programs for research administrators and has expanded its content and potential audiences to include PIs, research managers, and others. The Cardinal Curriculum can lead to certification in internal policy and process. It has two levels to address individual development from novice to expert. Level I classes should be completed before attempting Level II. Training modules are publicly available and integrated with campus policies, procedures, and other reference tools throughout.

In-House Policies Parallel Federal Ones

An important component of training content is the institution’s corpus of policies, process documentation, information resources on financial and proposal submission systems, and internal directives. Recently, a major university embarked on a review and upgrade of its research management documentation. Officials report significant progress but note the need for comprehensive training content management to ensure consistency. Training must flow through policy and process layers to maintain both currency and continuity.

In-house training programs greatly benefit by incorporating specific institutional policies and processes. Most learners will want to know how to manage research at their home institution and why it is done in this way. When institutional policy and practice are linked to training, participants come away with useful skills and explanations for their workplace colleagues and clients.

Training Program Development: One Institution’s Story

In 2009, as part of a campus-wide strategic plan, Auburn University hired outside consultants to assist in evaluating and assessing not only its Office of Sponsored Programs but the research enterprise as a whole. In March 2010, the comprehensive final report included extensive comparisons to peer institutions and over 40 recom-
mendations for the research administration functions alone. Among them, a need for a formal education program to assist faculty and staff in understanding their compliance responsibilities and navigating the process was identified.

In response, the office developed its Compass curriculum in spring 2012. It guides research administrators through the myriad channels toward compliance expertise, including minimizing and hopefully avoiding errors. Proceeding from a quote from Henry St. John, “Truth lies within a little and certain compass, but error is immense,” the Compass curriculum instills a heightened sense of responsibility, inspiring participants to perform their jobs at the highest level.

Over two years, 88 employees enrolled in Compass, which has evolved from a nine-week certification course to a robust curriculum composed of an introductory prerequisite class, a ten-week certification course, two advanced classes with prerequisites per semester, and a refresher class held during the summer. It also hosts brown bag lunches for faculty and presents selected research administration topics at the departmental level on invitation. See Martha Taylor, “Assessing Your Sponsored Programs Office” NCURA Magazine (August 2011) for more information.

Summary: Outcomes Drive Content Decisions

Basic functions in grant management are fairly well established and available from a variety of sources. They can be customized to meet the unique needs of, and outcomes anticipated by, individual institutions: improved service to faculty, improved compliance, increased proficiency, and skilled workforce retention. Mechanisms to update information should also be considered.
1105.5 Who Should Be a Trainer?

Not every content expert is a good trainer, nor do good trainers always have the nuts-and-bolts expertise to answer workplace questions.

As mentioned earlier, some institutions combine dedicated trainers with skilled practitioners who provide a “reality check” on how processes are actually implemented at the departmental level. Other institutions have helped knowledgeable research administrators to develop training skills. Many institutions look to research administrators with a proven background as presenters at NCURA and/or SRA meetings when developing their in-house training programs.

The Importance of Program Structure

The choice of training personnel can also depend on the structure of the training program. Many institutions combine classes taught by various units to form a comprehensive program. For example, classes taught by pre-award offices, post-award offices, and compliance offices may contribute to one certificate program.

Other institutions have a formal training unit, with dedicated leadership and support staff; for example, Auburn University, Stanford University, Duke University (https://finance.duke.edu/research/training/index.php), Harvard University, the University of Utah, and the University of Miami (http://www.miami.edu/finance/index.php/ora_homepage/training/)

Duke University teams respected departmental grant managers with central office personnel to lead classroom discussions of best practices. Their performance is evaluated throughout the year, and feedback solicited to enhance the training product.

Selecting the Proper Oversight Office

Beyond the identification of good trainers, training programs require significant coordination. Many operations must be considered. How will registration be managed? How will training be tracked, particularly if it is offered as a certificate program or as required continuing education? For these and other reasons, a dedicated office with expertise in registration and tracking may be beneficial.

Alternatively, numerous “off-the-shelf” learning management systems (LMS) provide these functions.

Summary: Focus First on Expertise

Research administration training requires extensive knowledge of the field, not always readily available to trainers from outside the profession. When selecting trainers, institutions should consider research administrators with presentation experience gained through professional organizations, such as NCURA and SRA; trainers from a variety of institutional offices who bring specific topical knowledge; and/or departmental personnel with first-hand practical expertise.
Training Delivery Mechanisms

The same linear approach applied to training and trainer development is useful when considering effective delivery mechanisms. Options include, but are not limited to, classroom lectures, interactive laboratory classes, webinars, focus group discussions, streaming video broadcasts, on-line modules, large auditorium-style presentations, department presentations, and on-line chats.

Most of these options depend on the resources available and the content. Both NCURA and SRA offer excellent on-line/broadcast programming that can be used alone or in conjunction with institution-specific follow-up. NCURA provides on-campus workshops that can be combined with specific institutional training (http://www.ncura.edu/InstitutionalPrograms/On-CampusWorkshops.aspx).

Many institutions have developed on-demand training modules, which are particularly helpful for training on important new processes, systems, and emerging ideas that must be distributed continuously to a broad audience. The University of Wisconsin-Madison offers an extensive training program and frequently captures information from meetings, webinars, and other training venues for later study (https://www.rsp.wisc.edu/training/).

Consider Various Venues

Many established training programs prefer to use traditional classrooms. Classroom instruction is labor-intensive but offers the added benefits of dialog between trainers and learners and the opportunity to clarify and to elaborate when needed. Complex topics, such as F&A or export controls, may be best discussed in a classroom.

A number of electronic training platforms provide alternatives. When exploring them, understanding the differences between a content learning system and a learning management system (LMS) is important. An LMS is a comprehensive approach that includes “classroom and E-Learning management, content authoring and publishing, communication and collaboration, assessment and evaluation, competency and performance management, reporting, analytics and integration with HR or financial systems.” A content learning system, on the other hand, is “a course creation tool. It is [usually] purchased in conjunction with an LMS.” You will have to consider how these systems will be integrated with existing institutional systems and what resources will be needed to implement them.

Stanford University’s approach integrates on-line training with desktop references. According to the site, “The online classes can serve as an always-available desktop reference. Additionally, each class has a ‘webliography’ of links to policies, tools, forms and resources. Users are encouraged to bookmark these pages and use them to guide you in your daily work.” Stanford also provides instructor-led or online classes in many topics.

As training programs expand, developing a content management process, whether through a formal purchased LMS or in-house, is very important. As processes, polices, and systems change, trainers must be able to quickly identify and to adjust/update the instructional modules affected throughout the curriculum.
Sometimes a spreadsheet of key topics will suffice; sometimes a more sophisticated content management system is needed for comprehensive changes.

Supervisors, as well as the learners themselves, will want to maintain an accurate “transcript” of classes taken, credits earned. If institutional certification is required, an accurate record of when certification is achieved, and records of any subsequent continuing education required to maintain the certificate are essential. Most LMS systems can manage this process, or smaller initiatives might develop their own in-house means of recording class completed.

**Summary: Guard Against ‘One-Size-Fits-All’**

Training may be delivered in a variety of ways. Delivery mechanisms depend on many factors: the resources available to create and deliver the content; the content’s complexity and whether or not interactive question-and-answer components are necessary; the experience and “need-to-know” level of the learners; and their comfort with delivery mechanisms beyond the traditional classroom.

Whenever possible, training should be delivered in the manner that best meets target audience learning needs and most convenient to their working environment.
¶1105.7 **How to Evaluate Training**

This chapter has explored the relationships among several factors that influence training initiatives: perceived need for training; expected outcomes; content that supports outcomes; and content-appropriate delivery mechanisms. In this section, the discussion comes full circle: How should trainers demonstrate that their program has addressed perceived institutional needs, produced meaningful outcomes, enabled trainees to meet performance and proficiency standards, and resulted in an overall return on investment?

Many institutional training programs follow each class with a test or assessment to determine if learning has taken place. How this tool will be used depends on a number of factors: Is the class/module mandatory or elective? What is the “success threshold”? Is feedback on an incorrect answer built in? Will test results be provided only to the learner or become part of the learner’s record and available to the supervisor? Who will review the test questions periodically to ensure that they measure the appropriate learning objectives?

To facilitate testing, trainers should develop their content based on quantifiable learning objectives and emphasize key concepts throughout the training process.

**Tools Can Evaluate Content, Instructors, Delivery Method**

Some evaluation tools are used to improve content, instructor performance, efficacy of the delivery mechanism, or for other purposes. NCURA uses an excellent model that uses feedback from session participants and session monitors to measure how successful the training has been. Duke University regularly polls the mentors of students participating in their certificate programs for feedback and suggestions for improvement. Some institutions have developed a 360° evaluation process that takes input from different constituencies, including trainees, supervisors, faculty, and central administration.

A content matrix might be used to measure learning in individual classes or modules or expanded to measure the success of the overall training program. For example, it might identify six core concepts that entry-level staff should know; learners would have to pass an assessment or test to confirm that they have learned these concepts; and the training office might solicit feedback from end-users (faculty or supervisors) to confirm that the expected outcome has been achieved; for example, improved faculty support or compliance management. An LMS can provide highly sophisticated evaluation tools that allow trainers to see feedback immediately as well as trending data on which to base program revisions.

How should training programs report their success? Measures might include enrollment, feedback, percentage of trainees passing the test, even percentage passing the national Certified Research Administration exam. First consider the rationale for creating the training — the institutional expectations of positive outcomes as a result of training. Success might be reported in these larger, qualitative terms: increased faculty satisfaction in services provided; internal audit or monitoring reports of improved compliance practices; or evidence of increased adoption of new technologies or systems.
Summary: Evaluate ‘Outcomes’

Training success can be evaluated in many ways — from the perspective of the individual learner to return on institutional investment. Many tools and options are available for basic to sophisticated evaluations and trending. At the highest level, institutions are concerned that their initial expectations for training outcomes are met.
1105.8 **A Word about PUIs**

At most predominantly undergraduate institutions (PUIs), research is administered by central offices, with faculty managing a good portion of their projects alone or with the assistance of a graduate student or a departmental administrative staff member. This paradigm necessitates training focused on the PI’s need for centralized support, with central office staff providing both services and approvals. It may include informing faculty about changes in proposal development and submission processes, new rules and regulations, and/or training graduate students, postdocs, or post-award central office personnel to facilitate funded project management.

Many PUIs have combined offices overseeing human subject research and proposal development. California State University at Sacramento, for example, provides on-line compliance tutorials, workshops, and seminars designed to explain such topics as human subjects’ protections, to faculty and to offer tips on proposal development and project management (http://www.csus.edu/research/workshops/index.htm).

PUIs generally host their training in central pre-award offices, as they are likely to have the information most needed by faculty to develop and manage their funded projects.
1105.9 Conclusion

Training programs have proliferated in the past decades, perhaps due to increased compliance requirements, growth in sponsored program funding, need for increased faculty support in grant management, or simply to prepare and to retain skilled professionals. A host of exemplary in-house and professional association programs have taken various approaches to content using various methods.

Training programs succeed when they are closely associated with institutional needs and when content and delivery are correlated to specific institutional dynamics. With the increased capacity of new technologies to deliver high-quality training in the workplace, training may become a constant learning environment for research administrators at all levels.

The basic concepts outlined in this chapter are provided to assist colleges and universities in considering the depth and breadth of their training programs. They are scalable to the institution — private/public and small/large. If the basic tenets described above are followed, a continuum can naturally evolve as momentum builds.

NCURA has recently supported the development of degree programs in research administration. As these programs grow and mature, in-house training may become continuing education or updating for the new research administrator. Whatever the future holds, the need for information, knowledge, and skill will remain.
Case Studies

This section includes case studies relating to training and education activities for and by sponsored research administrators. These materials are culled from a variety of authoritative sources.

Case Studies on Research Ethics Training
Office of Research Integrity, Department of Health and Human Services

Research administrators may wish to incorporate one or more of the following case studies — or similar types of such case studies — in developing training materials on research ethics.

Case Study #1: The Price of Collaboration

Dr. March walks into the office of Ethel Nightingale, and drops a packet of papers into her “in” box. Ethel takes a quick look and sees that it is a reimbursement request for the meeting that March organized among the group of researchers collaborating on a project funded by the NIH. Glancing a bit farther down the page, Ethel pauses, and then gets up and goes to look for Dr. March in her office.

Ethel asks, “Dr. March, can I ask you a couple questions about this reimbursement for your meeting last week?”

“Yes, Ethel, as long as it won’t take too long. I’ve got a meeting in a few minutes,” replies Dr. March.

Ethel continues, “I’m wondering if there’s a typo here. It says you spent $6,000 for two days’ accommodations for 10 people. This seems much too high to charge to the NIH grant. I thought that the point of using the institute’s Inn and Conference Center was that you could save money by not having your colleagues stay at local hotels.”

“Well, it could have been less, but we wanted to be sure we wouldn’t be disturbed, so rather than using just one meeting room, I rented the entire west wing of the center. Here,” Dr. March says, taking the papers from Ethel, “let me just increase the number attending to 20, and that should take care of any cost questions the bean-counters might have.

“I don’t think the accounting office will approve this expense,” Ethel responds tentatively, “and the charge for a case of wine will never fly; the NIH doesn’t allow charges for alcohol on its grants.”

“So, just make it a charge for a catered meal. Be creative. The important thing is that the meeting went beautifully and that’s critical at the start of a successful collaboration. We all got to know each other, generated some great ideas, and got a lot of planning done. Don’t worry, the NIH will get its money’s worth, and that’s all that really matters. Go ahead and do whatever you need to do to make this work,” concludes Dr. March as she hands the papers back to Ethel. “Right now, I’ve got to get to my meeting.”
Case Discussion

Interests of the Affected Parties. Ethel Nightingale has an interest in maintaining a good working relationship with researchers in her department, like Dr. March, and being seen by them as competent and efficient. She is also interested in doing her work properly so as to keep her job and avoid accusations of wrong doing or fraud.

Dr. March has an interest in facilitating a successful collaboration among those involved in this project. She is also interested in producing exciting and useful research results, minimizing the amount of time she spends on paperwork, and making efficient use of her time. While she may not be aware of it, she has an interest in remaining eligible for federal funding, and in avoiding both questions about how grant funds are utilized and time-consuming investigations.

Other members of the collaboration have an interest in a successful collaboration, in producing exciting and useful research results, and in avoiding problems associated with investigations of questionable grant expenditures.

The institute has an interest in facilitating the research conducted by its researchers. It is interested in maintaining and, if possible increasing, its national prestige and its receipt of federal research funds.

The NIH is interested in funding research projects that produce exciting and useful results. It is also interested in having the funds it awards be spent as effectively as possible within its policies.

Obligations. Ethel Nightingale has obligations to Dr. March, the collaborative team, the institute, and the NIH to check that the grant funds are used in the proper manner, and to facilitate the research of the collaborative team members. She is obligated to aid Dr. March in March’s role as the PI for this grant. Nightingale also has a basic obligation to be sure that all the forms she files are true and accurate.

Dr. March, as the principal investigator on the project, has obligations to her collaborators, the institute, and the NIH to be sure that the research project is conducted as effectively as possible, that the grant funds are spent in accord with the terms of the grant and with NIH policies, and to be honest. She also has obligations to her collaborators and her institute to avoid involving them in fraud, and to Ethel Nightingale to support Ethel as she carries out her job.

The institute, as the award institution for the collaborative project, is obligated to follow the terms of the award and NIH policies in administering the grant.

Ethical Issues. Dr. March’s actions suggest that she sees a conflict between her obligation to follow the NIH policies and her obligation to conduct the collaborative research project in the most effective manner possible. She also seems to feel that there is a conflict between her interest in spending time conducting the research and her obligations to oversee the grant with honesty and to support Ethel’s administrative role.

Right now, Ethel is confronted with a conflict between an obligation to Dr.
March to do as she is directed (and thereby facilitate the research), and an obligation to the institute and the funding agency to follow their policies and complete her work with honesty. Ethel finds herself with conflicts between her interests in maintaining a good relationship with Dr. March and facilitating the research project in the short term, and the longer term obligations Ethel has to support research by March, and at the institute as a whole, by helping to ensure that the relevant policies are followed and honesty is maintained.

**Consequences of Actions.** If Ethel simply proceeds as Dr. March has directed her, she would quickly finish with filing the reimbursement and all might seem fine, but only for a while. In addition, Ethel will be aware that the information filed is not completely truthful, and this could cause her worry and possibly a diminishment of her self-esteem. In the longer term, some of the true facts are likely to come to light when someone takes a closer look at the forms, or if an audit is carried out. In the end, there would be serious negative consequences for all those involved. Ethel could even lose her job.

If, on the other hand, Ethel immediately goes to the department or division head and openly accuses March of dishonesty in the expenditure of grant funds, there is likely to be an uproar among those in the department, and Ethel could still lose her job.

However, if Ethel does not go ahead with filing the reimbursement, but instead engages Dr. March in further conversation making her aware of the details of the policies and what has happened to people and institutions who have violated them, Ethel may be able to convince Dr. March to consider other solutions to the situation. It might also be helpful if Ethel to consulted a fellow administrator who could give her ideas about how to impress on Dr. March the seriousness of the requirements of institute and NIH policies.

**Link:** http://ori.dhhs.gov/education/products/rcradmin/topics/colscience/case_1.shtml.

**Case Study #2: A Possible Co-Author**

Yolanda, a graduate student in Prof. Zhu’s lab, is talking with Wanda, Prof. Zhu’s secretary. She notices the title page of a manuscript atop a pile of papers on Wanda’s desk. When she looks at it more closely, Yolanda is surprised to see that there are only four co-authors: her, Valerie (also in Prof. Zhu’s lab), Prof. Albert, and Prof. Zhu.

Four months ago, Yolanda spent several weeks in Prof. Albert’s lab at a different university learning an experimental technique that she needed for her research. This was a technique with which the Zhu lab had had no experience. For most of her visit, she worked side by side with Ben Brown, a post-doctoral fellow. Ben not only taught her the technique she needed to master, he also gave her good advice on her experimental design, critiqued her interpretations, and during the last week of her visit, helped Yolanda complete a series of experiments. Those experiments became an important part of the experimental section of this research paper into which
Wanda is entering various edits.

“Wanda, I think there’s an error here,” Yolanda begins. “Ben Brown’s still missing from the co-authors, and I know I put a note on the last draft about this. He was on the first few drafts, but somehow he got dropped.”

“Oh, now that you mention it, I do recall seeing his name before,” replies Wanda. “Well, what I got from Prof. Zhu before he left on his trip was what he told me was the final version. I’m supposed to finish up the manuscript, and get it sent out to the Journal of Important Research today.”

“But you can’t do that,” exclaims Yolanda. “It wouldn’t be fair. You’ve got to put Ben’s name back on the paper before you send it.”

Case Discussion

**Interests of the Affected Parties.** Wanda is interested in being perceived by Prof. Zhu, and to a lesser extent his lab, as being skilled and efficient in completing the tasks assigned to her, and so maintaining her employment. She also has an interest in there being a good, cooperative atmosphere within the research group.

Yolanda is interested in maintaining her professional relationships with Prof. Albert, Ben Brown, and most of all Prof. Zhu, her advisor. She has interests in conducting significant research, in successfully completing her graduate work, in being a co-author on publications, and in securing her next position.

Prof. Zhu has an interest in his laboratory conducting significant research and then receiving credit by publishing that research. He is interested in his graduate students and post-doctoral fellows progressing in their development as professional researchers, in establishing and maintaining productive collaborations, and in having his laboratory and its support services run smoothly.

Prof. Albert has very similar interests to those of Prof. Zhu.

Ben Brown has an interest in participating in collaborations that will benefit his career, and in receiving appropriate attribution for his efforts.

The members of the two laboratories are interested in being recognized for their contributions, in having access to beneficial collaborations, and in maintaining a cooperative, supportive atmosphere within their research groups.

The two universities have an interest in facilitating the completion of significant research by their researchers, and in avoiding controversy and confrontation among these researchers.

**Obligations.** Wanda has an obligation to complete her work as directed by Prof. Zhu, but she is also obligated to help facilitate his work and the progress of his laboratory.

Yolanda has an obligation to do all she can to see that those who have contributed to a body of research receive appropriate attribution. She also has obligations to inform her advisor, Prof. Zhu, of what occurred during her time in the Albert lab, and to seriously consider Prof. Zhu’s evaluation of appropriate co-authorship.
Prof. Zhu has obligations to ensure that appropriate attribution is given to all those who contribute to publications that originate from his laboratory, to honor agreements that he has made with colleagues, to communicate clearly with his students and staff, and to be familiar with the work of researchers in his laboratory.

Prof. Albert has an obligation to honor agreements that he has made with colleagues, but he is also obligated to protect the interests of members of his laboratory.

**Ethical Issues.** Wanda’s obligation to follow Prof. Zhu’s instructions is in conflict with her interest in maintaining a good atmosphere within the research group, particularly with Yolanda. Yolanda’s obligation to do all she can to see that Ben Brown receives what she perceives to be appropriate attribution appears to be in conflict with her obligation to honor Prof. Zhu’s decision. There may also be conflicts related to obligations to honor agreements, and communicate clearly with students and other colleagues, but there is not enough information given in the scenario to be sure of what these are.

**Consequences of Actions.** If Wanda figures that it can all be sorted out later, and so accedes to Yolanda’s demand to add Ben Brown’s name before she sends off the manuscript, she is putting herself at risk for unpleasant consequences. She will have made a change in a matter that is of great importance to researchers, authorship. As a result, Prof. Zhu is likely to be upset not only because she has made an alteration without consulting him, but because her actions would be considered to be a breach of research ethics by his lab. It is considered unethical to list someone as a co-author without his/her permission, or if he/she does not meet the criteria for co-authorship. There may be good reasons why Brown’s contributions were not considered to be significant enough to warrant co-authorship.

If Wanda simply ignores Yolanda and dismisses her concerns, Yolanda is likely to be upset and resentful toward both Wanda and Prof. Zhu. There is the potential for discord within the Zhu lab as well as between Prof. Albert and Prof. Zhu and their research groups.

However, if Wanda explains that she can’t make any changes without Prof. Zhu’s direction, but that changes might be possible later, after Yolanda has a talk with Prof. Zhu, Yolanda may realize that she needs to talk directly with Zhu and make her case through the proper channels. After all, the manuscript still has to go through the review, revising and publishing processes, and so there is still time for changes to be made. In addition, it is not clear what agreements were made between Zhu and Albert, what Zhu knows of the work Yolanda did with Ben Brown, whether Yolanda has ever done more to address this question than just put notes on drafts of the manuscript, and whether there are reasons of which Yolanda is not aware for not including Brown as a co-author. What is needed here is some frank, open communication among the researchers concerning the work presented in the manuscript and the criteria for co-authorship. Wanda may be able to catalyze this conversation.

Case Study #3: Supporting Documentation

Janet Jones is a pre-award specialist for the engineering school. She is working on putting in the final edits, and then assembling a grant application Prof. Wilson is submitting tomorrow to the NSF. In particular, she is double-checking to be sure that she has all the letters and other supplementary documents that need to be sent with the application. Unfortunately, there is one thing that is bothering her.

In the text of the application, Prof. Wilson presents, with citation, a lot of preliminary, unpublished data from a research group in a different country with whom he has worked in the past. However, Janet cannot locate either a letter giving Wilson permission to cite these data, or any sort of documentation that a collaboration with this group is planned as part of the new research project. In fact there is no mention of either of these items in the list of supporting documents, and she recalls that a letter of permission was required when Prof. Wilson included some unpublished results from a different colleague in a journal article he submitted recently. “What should I do now,” she wonders.

Case Discussion

Interests of the Affected Parties. Janet Jones has an interest in doing all she can to help the faculty with whom she works secure grant funding. She is interested in demonstrating her competency and efficiency by carrying out her duties as quickly, accurately, and independently as possible.

Prof. Wilson is interested in obtaining grant funding for his research. He is most probably also interested in minimizing the time he spends on bureaucratic matters, maintaining good relationships with his current and past collaborators, and avoiding any question of inappropriate behavior.

The members of the research group which is the source of the unpublished data are interested in furthering their research careers, something which is usually dependent upon being the first to publish a new discovery so as to receive appropriate attribution for one’s work. They are most probably interested in maintaining good relationships with their collaborators and colleagues.

The university of Jones and Wilson is interested in supporting the work and research of its faculty members so that they are able to receive grant awards.

The NSF is interested in awarding grant funding to researchers who are skilled and productive as well as ethical.

Obligations. Janet Jones has obligations to Prof. Wilson and the university to help ensure that the grant applications that are submitted are of the highest quality, scientifically and ethically. Part of her job responsibilities are to be knowledgeable concerning the policies of funding agencies and, when appropriate, to bring potential problems to the attention of the faculty members with whom she works.

Prof. Wilson has an obligation to know the policies and procedures required by the funding agencies to which he is applying. He also has obligations to his collaborators and colleagues to follow the terms of collaborative agreements, respect his
colleagues’ right to control their data, and be certain he has permission to use data that are not his own.

**Ethical Issues.** Janet feels a conflict between her interest in doing her job as efficiently and independently as possible and her obligation to ensure that the applications she helps prepare are of the highest quality. Prof. Wilson’s interest in preparing the strongest research proposal may be in conflict with his obligations to his colleagues who are the source of the unpublished data, and the interests of those colleagues.

**Consequences of Actions.** If Janet decides to do nothing further, and just send off the grant application without checking on things any further, there may be no negative consequences. However, there may be some uncertainty about the status of the unpublished data from the other research group that could lead to difficulties. The unpublished data are cited as having come from another research group, but Janet does not seem to know if these data were generated as part of the earlier collaboration, or if they belong to his colleagues and were given to Wilson along with permission to include them in his grant application, or if Wilson is using the data without permission. In addition, Janet seems uncertain as to whether the funding agency requires some sort of documentation confirming permission to use unpublished data cited as a “personal communication” the way some journals now do.

If Janet simply assumes the worst, and storms into Prof. Wilson’s office accusing him of “trying to get way with using someone else’s data” in his grant application, she would be endangering her working relationship with Prof. Wilson, and perhaps her job. No one reacts well to being accused of behaving unethically.

However, Janet could demonstrate her professionalism by doing a quick checking to see if documentation of permission to use data cited as a “personal communication” is required by the funding agency (not required by the NSF at this time). She could then follow up by inquiring of Prof. Wilson concerning his use of the data. In this manner, she would be most likely to further everyone’s interests. Asking polite questions that seek clarification of a situation, usually lead to a more productive exchange of information. If the situation warrants, Janet may be able to suggest to Prof. Wilson that he get his colleagues’ agreement to include the unpublished results in his grant before he sends it in, and so help Wilson to avoid future unpleasantness in his collaborative relationships.


**Case Study #4: Facilitating Sharing Between Collaborators**

“Oh hello, Prof. Thomas. It’s nice to talk with you,” responds Jason Reynolds, the departmental administrator after picking up the phone. “I’ve missed those long talks about fishing we used to have when you were here on sabbatical working with Prof. Simonds. Come to think of it, we haven’t talked since we closed out that grant
on which the two of you were collaborating last year. So, how are things at Enor-
mos State, and how has the fishing been?”

“It’s nice to talk with you again too, Jason. Work has been going well, and the
fishing this summer was great. Unfortunately, I’m calling about a problem in your
department. I’ve contacted Steve Simonds four times about getting some more of
antibody Ab2765 that we prepared during our research together, but he keeps put-
ting me off. In our last conversation, he actually said that there wasn’t enough left
to send, and that just can’t be true. This whole thing is holding up our work here,
and we can’t keep waiting around. So, I decided to call you. I don’t want to cause
trouble, and you know that that antibody is as much mine as Steve’s. It seems to me
that the easiest solution to this, for all of us, is for you to go to Steve’s lab, get some
of the antibody from his technician, and have it shipped to me as soon as possible.”

Case Discussion

Interests of the Affected Parties. Jason Reynolds is interested in maintaining good
working relationships with the faculty members of the department in which he
works, and in keeping his job. He may also have some interest in maintaining an
amicable relationship with Prof. Thomas.

Prof. Thomas is interested in conducting further research based on the results
of a previous collaboration. He is interested in obtaining research materials, in this
case, antibodies. He is also interested in avoiding the time, energy, and unpleas-
teness that are likely to be associated with a confrontation concerning access to the
antibodies. He may also be interested in maintaining a collegial relationship with
his previous collaborator, Prof. Simonds.

Prof. Steve Simonds is interested in furthering his research. He is interested in
maintaining control of the disposition of data and research materials from his labora-
tory. He has a reasonable expectation that others will respect his control of the data
and research materials that his research group generates. He may also be interested in
maintaining a collegial relationship with his previous collaborator, Prof. Thomas.

Members of Prof. Simonds’ research group, including his technician, have inter-
est in maintaining good professional relationships with Prof. Simonds, in further-
ing their research, in avoiding the disruptions associated with confrontations, and in
being perceived as good future colleagues by established researchers in their field.

The university to which the collaborative grant was awarded is interested in
facilitating the research of its faculty members including collaborations, in provid-
ing an environment that is conducive to winning approval of future grant applica-
tions, in providing an environment that is supportive of its staff and students, and
in avoiding scandal.

Obligations. Jason Reynolds has an obligation to act in the university’s best
interests, and to help it meet its obligations, but he also has an obligation to support
and respect the researchers in the department in which he works.
Both Prof. Thomas and Prof. Simonds, as members of a collaborative project, have an obligation to follow the terms of the collaborative agreement, and if no agreement was written, to share access to and use of the data and research materials generated by that collaboration. They also have an obligation to communicate openly and honestly with each other.

The university which administered the collaborative grant has an obligation to see that the terms of the collaborative agreement are honored, and/or that those who helped generate the research materials produced under that grant have access to them.

**Ethical Issues.** Jason Reynolds’ obligation to help the university meet its obligations is in conflict with his obligation to respect Prof. Simonds’ control of his laboratory. Prof. Thomas’ interest in furthering his research, is in conflict with Jason’s interest in maintaining a good working relationship with Prof. Simonds, with Prof. Simonds’ interest in controlling the disposition of materials from his laboratory, and with Prof. Thomas’ obligation to communicate openly with Prof. Simonds. It appears that Prof. Simonds sees his obligations as a member of a collaboration, including sharing and communicating with Prof. Thomas, to be in conflict with his interest in furthering his research and/or in maintaining control of the disposition of materials from his laboratory.

**Consequences of Actions.** If Jason Reynolds proceeds as Prof. Thomas requests, goes to Prof. Simonds’ laboratory, obtains some of the antibody without Prof. Simonds’ knowledge, and sends it to Prof. Thomas, it may be that conflict will be avoided for a short period of time. However, what happens when Prof. Thomas requests more antibody, or when Prof. Simonds finds out what has occurred? It is likely that here will eventually be an uproar in the department, a major falling out between Prof. Simonds and Jason Reynolds, and a general loss of trust in Reynolds by members of the department. It could cost Jason Reynolds his job.

If Jason Reynolds refuses to help Prof. Thomas and does nothing further about the situation, he is most likely only delaying the day when conflict and disruption affect the department. The longer this situation continues, the more polarized the two researchers probably will become, and the more difficult the conflict will be to resolve.

However, if Jason Reynolds alerts some key people to the situation it may be possible to resolve it before communication between the two former collaborators deteriorates further. As the recipient of the collaborative research grant, the university, through its personnel, is obligated to act to resolve this situation, but some basic information needs to be gathered: Was there a collaborative agreement and if so, what were its terms? What is the reason for Prof. Simonds’ refusals? (It could be just a communications failure. Maybe Prof. Simonds really has no more antibody left from the collaboration. Maybe Prof. Thomas has already used all the antibody to which he is entitled.) Precisely whom Jason Reynolds contacts will depend on the details of the situation, and the personalities and relationships of the people involved. Some possibilities are the department chair or a faculty member who has worked with both of the collaborators. However, this is a situation that needs to
move to mediation by faculty, with the assistance of administrative staff like Jason Reynolds on matters such as agreements, guidelines, and policies.

¶1190  Knowledge Check

AIS editors

The Q&As in ¶1190.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 1100 has been understood. Note: For the answer key for ¶1190.1, see ¶1190.3, which appears on a separate page (page 1190:5) for testing purposes.

¶1190.1  Q&As

1. Training programs for research administrators are often undertaken for all of the following reasons EXCEPT:
   (a) To ensure appropriate compliance and grant management
   (b) To improve the service and science of faculty
   (c) To adopt related technologies, processes, and policies
   (d) To develop and maintain a skilled workforce

2. Driving the need for rigorous training programs are all of the following EXCEPT:
   (a) Rapid growth of sponsored program funding
   (b) Significant expansion of regulations and regulatory oversight
   (c) Office of Management and Budget
   (d) Changes in technology and information systems

3. Who benefits from research administration training programs?
   (a) The institution
   (b) The collaborating partners
   (c) The consumer (faculty)
   (d) All of the above

4. When developing training programs, ask yourself:
   (a) What do faculty say that they need from research administrators?
   (b) What is the federal baseline requirement for training?
   (c) Both (a) and (b)
   (d) None of the above
5. If you were to form a group of end users to develop a training program, which of the following should be part of the group?

(a) Senior department personnel  
(b) Central office leadership  
(c) Both (a) and (b)  
(d) None of the above

6. Training delivery mechanisms are dependent upon many factors including all of the following EXCEPT:

(a) The resources available to create and deliver the content  
(b) The content complexity and whether or not opportunity for interactive question and answer components are necessary  
(c) The “need-to-know” level of the teachers  
(d) The systems available to facilitate delivery mechanisms beyond the use of traditional classroom settings

7. Effective training programs should match:

(a) The time devoted to completing assessment drills  
(b) Perceived needs and expected outcomes  
(c) Both (a) and (b)  
(d) Neither (a) nor (b)

8. A positive “return on investment” with respect to training programs would produce which of the following?

(a) Meaningful outcomes  
(b) Cost savings in budget preparation activities  
(c) Enable trainees to meet performance and proficiency standards  
(d) Both (a) and (c), but not (b)

9. Which statement is TRUE?

(a) Training programs have grown significantly in the past decades.  
(b) In-house training programs are the most effective training option.  
(c) Training programs succeed when they are closely associated with the leading institution in the field of research administration.  
(d) Training programs succeed when they employ the most sophisticated technology solutions.
10. Which statement is FALSE?

(a) Training programs succeed when they are closely associated with institutional needs.

(b) Associations, like NCURA, are an excellent source for recruiting faculty trainees.

(c) Content and delivery of training programs should be correlated to specific institutional dynamics.

(d) It is important to create a continual learning environment for research administrators.

\section{1190.2 Discussion Topics}

1. Where would you go to look for training professionals? What qualifications would you be looking for in such individuals?

2. Why are evaluation and assessment such essential components of any training program? In the discussion, be sure to enumerate exactly what aspects of the program you would be evaluating/assessing.

3. Does your training program make use of changing technologies? If not, why not? If yes, how is this done?

4. Discuss the role training plays in developing, maintaining, and, especially, retaining a skilled sponsored research administration workforce.

5. What are the contributing factors that initially prompted your institution to develop training and professional development activities for faculty and staff? Have the factors changed over time? Is the program at your institution adequate at this time? Why, or why not?
¶1190.3 Answer Key

Following are the correct answers to the questions included at ¶1190.1.

1. (b) To improve the service and science of faculty
2. (c) Office of Management and Budget
3. (d) All of the above
4. (a) What do faculty say that they need from research administrators?
5. (c) Both (a) and (b)
6. (c) The “need-to-know” level of the teachers
7. (b) Perceived needs and expected outcomes
8. (d) Both (a) and (b), but not (c)
9. (a) Training programs have grown significantly in the past decades.
10. (b) Associations, like NCURA, are an excellent source for recruiting faculty trainees.
PLACE TAB

¶ 1300
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Introduction

This chapter describes the regulatory environment in which institutions that accept sponsored research awards must operate successfully and offers strategies for managing sponsored programs offices to meet this challenge.

Finding one’s way through the multitude of federal regulations applicable to the world of research administration could be an extremely daunting challenge. With the help of Rebecca Hunsaker of the University of Maryland, College Park, however, the task has become much easier and the journey far more pleasant. She presents a most thorough, down-to-earth discussion of the contents of the major regulations that are applicable to the administration of grants, contracts, and cooperative agreements.

Hunsaker’s review of the regulations is much more than just a recitation of their contents, although that, too, is accomplished in a very clear and helpful fashion. She goes on to relate the regulations and their contents to real-life day-to-day issues that confront research administrators. Hunsaker leaves the reader with a much better appreciation of what one needs to know about the requirements and how this knowledge and understanding can contribute to the improved effectiveness of the research administrator. Hunsaker effectively illustrates the relationship that should exist between the OMB requirements and the financial management policies and procedures adopted by grantee institutions.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶1305, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶1320), practical tools (at ¶1330), and case studies (¶1340) to aid in understanding and complying with the requirements. A “knowledge check” containing Q&As and discussion topics is included at ¶1390.
Sponsored programs administrators are faced with the challenge of understanding a myriad of federal regulations that govern how awards are managed in their organizations. The key to effective management is the ability to focus on which of these regulations has the most impact on the daily operations and management of sponsored programs at both the department and central administration levels.

This effective management must start with an understanding that institutional policies and procedures for managing sponsored programs need first to comply with state and federal regulations governing these funds. While regulations may vary from state to state, the federal government has charged the Office of Management and Budget (OMB) with the responsibility for overseeing the regulations most commonly associated with managing federally sponsored research. This chapter focuses on understanding the most important aspects of the Uniform Guidance and its impact on managing sponsored projects.

**1305.1 Types of Funding Agreements**

The first step in understanding which rules apply to a particular sponsored program is knowing what kind of agreement the institution has with the funding agency. Simply stated the institution should ask: Is the award a contract, a grant, or a cooperative agreement? The answer to this question will help determine where to go for guidance on managing the award and which regulations must be adhered to in doing so.

The Federal Grant and Cooperative Act was signed into law to stipulate the circumstances under which agencies are to use procurement contracts, grant agreements, and cooperative agreements to properly reflect the relationship between the federal government and other entities.1

The three main instruments used by the federal government are defined under the act as follows:

◆ **Procurement contract**: The legal instrument used whenever the principal purpose of the agreement is the acquisition by purchase, lease, or barter of property or services for the direct benefit or use of the federal government.

◆ **Grant agreement**: The legal instrument used when no substantial involvement is anticipated between the agency and the recipient whenever the principal purpose of the relationship is the transfer of a thing of value to the recipient to carry out a public purpose of support (often referred to as an “assistance award”).

◆ **Cooperative agreement**: The legal instrument used when substantial involvement is expected between the agency and the recipient when the principal purpose is to

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transfer something of value to carry out a public purpose.

While the distinctions between these three types of mechanisms can be vague, the difference is sometimes described in research as follows: Grants or assistance awards are generally given to an institution for research the principal investigator (PI) wants to do, while contracts are awarded to institutions so the government can purchase or acquire items or research the government needs for its benefit.

Once the determination is made as to what type of agreement instrument is being used, it is then possible to determine which regulations apply to the agreement. The Uniform Guidance has been written to incorporate the old cost and administrative circulars into one unifying document for the administration of Federal awards. The Uniform Guidance applies to Federal contracts, grants, and cooperative agreements, with few exceptions. The Federal Acquisition Regulations (FAR) still govern the administrative policies for federal contracts.

§1305.2 Overview of Uniform Guidance

The Office of Management and Budget (OMB) issues regulations to federal agencies outlining the rules they are required to follow when issuing federal funds. In December of 2013, OMB issued the Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards, commonly known as the Uniform Guidance. This document, which has been codified at 2 CFR 200, supersedes prior guidance found in the OMB Circulars. The goal of the Uniform Guidance is to simplify and clarify the sometimes contradictory and duplicative language found in the various circulars, as well as to streamline the guidance and reduce administrative burden to both the federal agencies and recipients of federal funds. It is also worth noting the increase of language regarding internal controls in the Uniform Guidance.


As mentioned previously, the Uniform Guidance was issued by the federal government in December of 2013. Federal agencies were given six months from that date to issue plans for implementing these guidelines into their own policies and procedures. In December of 2014, OMB published an update to the Uniform Guidance via the Federal Register which contained a number of technical corrections to the previous version. In addition, this update also included the implementation plans for all of the federal agencies. Of course, it is still necessary to refer to the individual federal agency’s policies and procedures, proposal guides, and award administration guides during the course of administering federal awards as not all of their policies and practices are included within the Uniform Guidance itself.

Finally, despite the fact that the Uniform Guidance has been in place for a number of years, it is particularly important to review every award document for its applicability, as agencies differ in how and when they implement the Uniform

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Guidance. In some cases, the addition of incremental funding to an award previously administered under A-21, for example, may also include language instructing the recipient institution that the new funding should now be administered under the Uniform Guidance. In other cases, the agency has determined that the entire award should be administered under the guidance of the circular under which it was originally issued, irrespective of the addition of new funding.

1305.3 Organization of the Uniform Guidance

The Uniform Guidance is broken into six subparts and twelve appendices:
* Subpart A—Acronyms and Definitions (see 1305.4)
* Subpart B—General Provisions (see 1305.5)
* Subpart C—Pre-Award Requirements (see 1305.6)
* Subpart D—Post-Award Requirements (see 1305.7)
* Subpart E—Cost Principles (see 1305.9)
* Subpart F—Audit Requirements (see 1305.11)

1305.4 Acronyms and Definitions

Perhaps the most overlooked section of the Uniform Guidance is the definitions section. Here the user can find answers to many common questions. For example: What does the government mean when it talks about equipment? Should an institution include the cost of shipping a piece of equipment when determining its total cost? The definitions section gives clear-cut answers to these and other questions.

**Uniform Guidance, Subpart A**

§ 200.33 Equipment means tangible, personal property (including information technology systems) having a useful life of more than one year and a per-unit acquisition cost which equals or exceeds the lesser of the capitalization level established by the non-Federal entity for financial statement purposes, or $5,000.

§ 200.2 Acquisition cost of equipment means the cost of the asset including the cost to ready the asset for its intended use. Acquisition cost for equipment, for example, means the net invoice price of the equipment, including the cost of any modifications, attachments, accessories, or auxiliary apparatus necessary to make it usable for the purpose for which it is acquired.

The definitions section is a great place to gain a basic understanding of many of the terms and underlying principles in managing Federal funds. Some of the most commonly used terms in funds management are listed in this subpart and included below.

**Uniform Guidance, Subpart A**

§ 200.22 Contract means a legal instrument by which a non-Federal entity purchases property or services needed to carry out the project or
program under a Federal award. And § 200.23 Contractor means an entity that receives a contract as defined in § 200.22. Note that under the circulars this term used to be “vendor.”

§ 200.29 Cost sharing or matching means that portion of project costs not paid by Federal funds.

§ 200.71 Obligations mean the amounts of orders placed for property and services, contracts and subawards made, and similar transactions during a given period that require payment by the non-Federal entity during the same or a future period.

§ 200.77 Period of performance means the time during which the non-Federal entity may incur new obligations to carry out the work authorized under the Federal award.

§ 200.80 Program income means gross income earned by the non-Federal entity that is directly generated by a supported activity or earned as a result of the Federal award during the period of performance.

§ 200.83 Project costs means total allowable costs incurred under a Federal award and all required cost sharing and voluntary committed cost sharing, including third-party contributions.

§ 200.86 Recipient means a non-Federal entity that receives a Federal award directly from a Federal awarding agency to carry out an activity under a Federal program. The term recipient does not include subrecipients.

§ 200.92 Subaward means an award provided by a pass-through entity (defined in § 200.74) to a subrecipient for the subrecipient to carry out part of a Federal award received by the pass-through entity. It does not include payments to a contractor or payments to an individual that is a beneficiary of a Federal program.

§ 200.93 Subrecipient means a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program.

§ 200.96 Third party in-kind contributions mean the value of non-cash contributions (i.e., property or services) that (a) benefit a federally assisted project or program; and (b) are contributed by non-Federal third parties, without charge, to a non-Federal entity under a Federal award.

¶1305.5 General Provisions

The General Provisions subpart of the Uniform Guidance begins with a discussion of the applicability of the document as a whole as well as certain subparts. Recipient institutions would do well to remember that the Uniform Guidance applies to the Federal awarding agencies, and not directly to non-Federal entities receiving Federal funds. § 200.101(b)(1) includes a table which is particularly helpful for recipient
entities in determining which parts of the Uniform Guidance apply to what types of awards. For example, Subpart D—Post Federal Award Requirements, Subrecipient Monitoring and Management apply to all Federal awards, but Subpart C—Pre-Federal Award Requirements and Contents of Federal Awards apply to all grant agreements and cooperative agreements, but not to cost-reimbursement contracts awarded under the Federal Acquisition Regulations.

This Subpart also outlines the process for a Federal awarding agency to obtain an exception to the regulations contained in Subparts A-E. As an overarching ideal behind the Uniform Guidance is consistency, OMB is only issuing exceptions in unusual circumstances.

1305.6 Pre-Award Requirements

Subpart C starts by instructing federal agencies on when it is appropriate to use a grant, cooperative agreement, or contract based on the needs of the government. Another highlight of the subpart is the provision that the government will not give money to people or institutions that have been debarred or suspended from doing work with the federal government. While the government may not debar those that commit relatively minor infractions, it can impose additional requirements on recipients or subrecipients if there is reason to believe they present a risk because they have a history of poor performance or if there are other reasons to believe that Federal funds could be in jeopardy.

This subpart also includes two additions which were not previously found in the circulars: guidance to the Federal awarding agencies on how to perform a risk-based assessment on potential recipients, and standard information which must be contained in a Federal award.

1305.7 Post Federal Award Requirements

Subpart D contains the most important concepts for managing Federal awards and is used by many entities as the baseline for establishing institutional policies and procedures. Subpart D is conceptually broken down into subsections to make it more user friendly. The breakdown is as follows:

- Performance, Financial and Program Management § 200.300-200.309
- Property Standards § 200.310-200.316
- Procurement Standards § 200.317-200.326
- Performance and Financial Monitoring and Reporting § 200.327-200.329
- Subrecipient Monitoring and Management § 200.330-200.332
- Record Retention and Access § 200.333-200.337
- Remedies for Noncompliance § 200.338-200.342
- Closeout, Post-Closeout, Collections § 200.343-200.345
Performance, Financial and Program Management

§ 200.300-200.309 highlight the importance of the grant or cooperative agreement recipient having strong financial controls and financial systems that accurately reflect how federal funds are spent, documented, and monitored. This ensures that only costs that meet the criteria of reasonable, allocable, and allowable are charged to federal awards.

Cost Sharing

A topic of great interest to research administrators is cost sharing. § 200.306 provides great detail on this issue and gives guidance on what type of costs can be used as cost sharing and how the value of donated time, supplies, and property should be calculated. Note that the term cost sharing is not defined in this section; the user must refer to Subpart A for that information.

When trying to determine what can be counted toward a cost sharing commitment to the federal government, it is important to remember the following:

1. The cost has to be documented and verifiable, meaning that receipts or other documentation must exist to prove that the cost was incurred at the price or cost claimed. This could include a statement from the donor as to the fair market value of an item or verification from a volunteer as to the number of hours worked on the project.

2. The same cost can’t be used on multiple projects as cost sharing. For example, if the institution purchases a piece of scientific equipment to be used on the project, it can’t claim the cost of the same piece of equipment as cost sharing on another project.

3. The cost has to be necessary and reasonable for completion of the project. This means that the cost must have benefited the project in some way.

4. The cost must be allowable under the cost principles. This tells the administrator that if the Uniform Guidance would have rendered the cost as unallowable, it cannot be used as cost sharing. For example, if a researcher decides to buy pizza for the team working on a project, the cost cannot count as cost sharing because paying for pizza on the federal award is not allowed in the first place. If the cost can’t be charged as a direct cost, it can’t count as cost sharing.

5. The cost can’t be paid by the federal government under another award without permission. Simply put, an institution can’t meet a cost sharing agreement on an HHS award using funds from the National Science Foundation (NSF).

This section also instructs the Federal awarding agencies that voluntary committed cost sharing cannot be used be used in the merit review of proposals. This language is particularly beneficial to recipient institutions as a method of proving to investigators that their proposals will not, in fact, be more competitive if they volunteer to cost share.

Program Income

The federal government is very clear that if a grant or cooperative agreement recipi-
ent makes money as a result of the use of resources provided by the award, during the period of the award, the government wants its fair share of that income. In § 200.307(e), the government lists three ways that program income can be handled:

1. Deduction: program income can be deducted from total allowable costs to determine net allowable costs. It must be used for current costs unless the Federal awarding agency authorizes otherwise. For example, if the Federal government issued a grant for $50,000 and income of $5,000 was earned, the recipient would only invoice the government for the net of $45,000.

2. Addition: program income may be added to the Federal award with the prior approval of the awarding agency. It must be used for the purposes of the approved scope of work.

3. Cost sharing or matching: program income can be used to meet cost sharing or matching requirements of the Federal award, only after obtaining prior approval from the Federal sponsor.

Budget Revisions and Program Plans
Understanding § 200.308 is one of the keys to effective management of Federal grants and cooperative agreements, for it is within this section that the Federal government states when a recipient must get written permission to revise budgets or program plans, and it gives recipients the flexibility to manage their awards by letting them make decisions about many routine issues.

The section states, in part, that the following items must be reported to the awarding agency and the recipient must get prior permission before changing the budget or program plans if the change results in:

1. Changing the scope of the project;
2. Changing key personnel who were named in the award document;
3. The disengagement from the project for more than three months or a reduction of 25 percent or more time devoted to the project by the principal investigator (keeping in mind that a 25% reduction is 25% of what was awarded, not 25% of 100% effort. Meaning if a PI promises to devote 50% effort to a project but wishes to reduce their effort by more than 12.5% they must obtain prior written approval from the sponsor);
4. Including costs that require approval under the Uniform Guidance Subpart E;
5. Transfer of funds for participant support costs as defined in § 200.75 to other categories;
6. Issuing a subaward or contracting out any of the work that was not agreed to as part of the original agreement;
7. Changing the amount of approved cost sharing or matching.

Expanded Authorities. Often referred to as “expanded authorities,” § 200.308(d) outlines the cost-related and administrative prior approvals that can be waived by federal awarding agencies. This allows the recipient of federal funds to better manage
its awards by eliminating the administrative steps that normally would be required if written permission were necessary. Recipients are given the following permissions:

1. The recipient can incur pre-award costs up to 90 days prior to the award being issued without asking permission of the federal agency. While this is done at the recipient’s own risk, it allows the recipient to start on a project while waiting for the formal award agreement. This can be especially useful if equipment needs to be ordered or people have to be hired to ensure the work of the project can progress according to schedule.

2. The recipient can execute a one-time extension of the expiration date by up to 12 months. However, it is important to note that the awarding agency must receive notice in writing with the supporting reason at least 10 calendar days before the award expires. The reason for the extension must be supportive of the award’s aims and not merely to spend an unobligated balance.

3. The recipient can carry-forward an unobligated balance to subsequent periods of performance.

**Period of Availability of Funds**

An important principle to understand is that only costs incurred or obligated during the period of performance are allowable under the award. Although the funding agency grants additional time for financial and technical reports to be submitted to the government, this does not mean that charges can still be placed against the award during that time. The only costs that should be paid after the expiration date are costs that were obligated before the award ended. A prime example of such a cost is an invoice from a subrecipient received after its portion of the award expired.

**Property Standards**

Sections 310-316 of Subpart D give instructions on how to manage property and equipment owned by the federal government or purchased with government funds. It speaks to insuring the property and the necessity of having good systems to track, control, report, and dispose of obsolete equipment.

*Real Property.* § 200.311 under the Real property heading states that any equipment purchased with grant or cooperative agreement funds will vest upon acquisition with the non-Federal entity as long as certain conditions are met. These conditions include agreeing to use the equipment to benefit other federally sponsored projects, taking proper care of the equipment, and agreeing to ship the equipment elsewhere if the government requests the transfer. By far the most common request to transfer equipment comes when a PI transfers from one institution to another. The government will most likely require that the PI’s former institution ship the equipment to the new institution so that the work on the project can continue.

*Supplies.* § 200.314 addresses supplies and other expendable property. It is important to note that in this section the regulations state that after the award ends, any unused supplies with a value exceeding $5,000 can be retained or sold, but in either case, the government has to be compensated. The good news is that this means
that any leftover supplies with a value of under $5,000 can be retained and used for other purposes without having to repay the federal government. This is especially useful in the case of lab supplies such as chemicals that are often purchased in bulk to lower expenses. The PI does not have to worry about returning unused portions of the chemicals and can use them in other research projects or to train students. However, the guidelines clearly state that the excess supplies cannot be used to provide services to nonfederal organizations for a fee.

It is also important to note that under the definitions found in Subpart A computing equipment and peripherals are now considered supplies, whereas under the old circulars they were primarily considered equipment. They must now be treated as any other material and supply cost, meaning they must be essential and allocable to the Federal award.

**Intangible Property.** The final highlight of the property section is the discussion of intangible property in § 200.315. This section states that the recipient can copyright or patent any work under the agreement but the Federal agency reserves a "royalty-free, nonexclusive and irrevocable right" to use the work for government purposes. The section goes on to explain what steps would have to be taken if any of the work was requested under the Freedom of Information Act (FOIA).

**Procurement Standards**

Sections 317-326 address the need for recipients to have written procedures to ensure that purchasing done with federal funds is done fairly and with open and free competition. Those involved in procurement must follow a code of ethics that ensures no real or apparent conflict of interest exists. In short, no one involved in a purchase may benefit in any way from the transaction.

These sections also stress the need to include small businesses and minority or women-owned businesses whenever possible. In addition, they set the minimum requirements a procurement system or process must include and discuss the need to document why a contractor or vendor was chosen, what bids were received or an explanation of why competitive bids were not received, and the basis for determining how the cost was agreed upon. The section echoes the cost principles in stating that costs must be reasonable, allocable, and allowable as determined by a cost/price analysis.

**Performance and Financial Monitoring and Reporting Requirements**

Subpart D § 200.327-328 lay out the responsibilities recipients of Federal funds have in managing and monitoring projects. This includes responsibilities with respect to subrecipients and their performance on the award. Final technical and financial reports must be submitted to the awarding agency either periodically as described in the agreement or 90 days after the expiration of the award as prescribed in § 200.328. Prime recipients (also known as pass-through entities) may find it necessary to give subrecipients only 30-60 days in which to submit financial reports, and perhaps technical reports also, in order to allow time for the prime to consolidate records and meet its 90-day deadline.
Financial Reports. It is important for researchers and administrators to remember that this 90-day post-expiration limit does not mean expenditures can continue to be incurred on the award during this time frame. Only obligations incurred during the period of the award are allowable as costs. Administrators must work with subrecipients, contractors, and even their own payroll departments to ensure that all expenses associated with the award are posted as quickly as possible so that a final financial report can be submitted within the required time frame.

Progress Reports. Technical or progress reports should contain brief descriptions of the accomplishments of the goals and objectives as stated in the award document and, if appropriate, an explanation of why stated goals could not be met. If the project is significantly delayed, the recipient is required to notify the agency of the problem, actions taken or under consideration to correct the problem, and any assistance needed to help resolve the problem. If the award has subawards, an institution should be sure to set the subaward due dates for progress reports prior to the sponsor’s due date for reports; this will allow time to incorporate the subcontractors’ findings into the reports and still meet the deadlines established by the federal government.

Subrecipient Monitoring and Management
Subpart D § 200.330-332 lay out the responsibilities recipients of Federal funds have in managing and monitoring subawards.

Subrecipient and contractor determinations. Institutions who receive Federal awards have the responsibility of determining the nature of the relationship with subrecipient organizations. The determination of whether a subrecipient organization is a subawardee or a contractor has far-reaching consequences for the pass-through entity so it is important for the pass-through entity to review the nature of the agreement and the work that is to be conducted via the agreement before issuing a subaward or a contract to another organization.

As outlined in § 200.330, the characteristics of a subrecipient include:
◆ Has its performance measured in relation to whether the objectives of a Federal program were met (i.e. the subrecipient will be responsible for a Specific Aim of a Federal award);
◆ Has responsibility for programmatic decision making;
◆ Is responsible for adherence to applicable Federal program requirements specified in the Federal award (i.e., the terms and conditions of the prime awardees award will be flowed down to the subawardee)
◆ The Federal flow through funds will be used to carry out a project or program for a public purpose, as opposed to providing a good or service which only benefits the pass-through entity.

The characteristics of a contractor, on the other hand, include:
◆ Provides the goods or services within normal business operations;
◆ Provides similar goods or services to many purchasers;
◆ Normally operates in a competitive environment;
◆ Provides goods or services that are ancillary to the operation of the Federal program or project

Note that under the Uniform Guidance, pass-through entities only recover F&A costs on the first $25,000 of the value of the subrecipient agreement, while contracts are assessed F&A costs on the total value of the purchase order. This perceived savings can sometimes result in an institution wanting to treat large contracts as subrecipients. Caution should be used when doing so, as the monitoring responsibilities required for subawards are much greater than those for contracts and can result in audit findings if not done adequately. As § 200.330(c) states, “the substance of the relationship is more important than the form of the agreement. All of the characteristics listed above may not be present in all cases, and the pass-through entity must use judgment in classifying each agreement as a subaward or a procurement contract.”

Record Retention and Access

Retention Periods. Record retention is an important aspect of managing federal awards. § 200.333 provides guidelines as to how long records—including financial documentation, statistical records, research data including lab books, and scientific papers—must be maintained after the award is closed by the government. In general, most records are required to be maintained for three years. Records must be maintained longer if litigation, claims, or audit findings are started before the three years is up, or if the non-Federal entity is notified in writing by the awarding agency, cognizant audit agency, or other Federal agency to extend the retention period. It should be noted that for state institutions, requirements for record retention may be longer under state laws. In such cases, state regulations should be consulted to determine specific requirements.

Methods for collection, transmission and storage of information. In accordance with recent statute, the Federal awarding agencies and the non-Federal recipient entities should keep their records in machine-readable formats rather than closed formats or paper. It is important for institutions to develop policies and practices for the disposal of electronic records. If an institution is audited, even records which are outside of their retention period are subject to audit if the organization has not yet disposed of them.

Remedies for Noncompliance

Under § 200.339, the federal government protects its interest in the award by reserving its right to allow for termination of the award in whole, or in part, under any one of the following conditions:

1. The federal agency can terminate the agreement if the recipient fails to comply with the terms or conditions of the award.
2. By Federal awarding agency or the pass-through entity for cause;
3. The Federal agency can ask the recipient to terminate the award. If the recipient agrees to stop work, the two parties must work out the terms of the termination including agreeing to what portion of the work will not be completed and when
the termination will be effective.

4. The recipient can request that the award be terminated by writing to the Federal government and explaining when it will terminate and what portion of the work cannot be completed. The government has the right to review the request and if it determines that the modified portion of the work will not accomplish the purpose for which the grant is made, it can terminate the award sooner as described in (1) or (3) above.

If a recipient does not comply with the terms and conditions of an award, the government has the right to take action to force the recipient to comply. The most common remedy an agency takes is to withhold payment of invoices until the recipient corrects the problem. Agencies will often use this measure to get principal investigators to submit technical reports. In rare cases, an agency may withhold any future funding for the project or program in order to ensure compliance. Additional steps up to and including legal action can be taken against the recipient based on the severity of the problem. The issue for recipients is that these invoiced costs have been paid by the recipient and are outstanding accounts receivable, which will not be paid until the agency is satisfied that the terms of the award have been satisfied.

Example

A post-award office at a large research university has turned the withholding of payments into a very effective tool in getting PIs to send in technical reports. If a sponsor refuses to pay because of missing technical reports, the office sends a notice to the PI and the department chair asking for a copy of the report to prove it has been filed. If the PI is not able to furnish a copy of the report, a second notice is sent explaining that the department’s operating account will be charged the amount of the unpaid invoice. If the report is still not forthcoming, the dean and the department chair are notified that the charge is being placed on the account. It is amazing how quickly reports are completed when the dean of a college personally requests a copy from the PI.

1305.8 Ensuring Compliance with Administrative Regulations

How can an institution ensure that it is in compliance with the administrative requirements of the Uniform Guidance? Compliance begins with having clear written policies and procedures that set, at a minimum, the same requirements as the Uniform Guidance itself. When establishing policies and procedures, it is important to remember that auditors will judge whether an institution is in compliance by comparing what they find in an audit to the written policies of the institution. Therefore, it is important not to write policies that are so restrictive that they result in audit findings because the policies were impossible to follow 100 percent of the time.

For example, the Uniform Guidance allows for a PI or designee to have approval authority over costs on the project. (See OMB A-21, C.4.d.(4).) If the institution writes its policy to say that only the PI has signature authority and an auditor finds an item of cost that was approved by a business manager or other knowledgeable
person on the project, the cost could be disallowed because the charge was not approved following the institution’s own policies.

The policies of the institution should be written to ensure that there are strong internal controls. This means that duties should be separated to ensure that no one person has complete control over all aspects of any financial transaction. This can be best illustrated by the control over payroll checks. If one person were in charge of placing someone on payroll, approving timesheets, and distributing paychecks, it is easy to see how fraud could occur. Auditors will insist that procedures are written and followed to ensure this does not happen.

**Award Monitoring**

Once strong policies and procedures are written, the next challenge is overseeing the awards to make sure the regulations and the policies and procedures are being followed. Discussed below are three practical ideas to help provide administrators some assurance that policies are being followed.

1. **Cost sharing**: While most institutions discourage cost sharing unless it is a requirement of the award, once the promise is made systems must be in place to ensure the commitment is met. Experience has shown that many times principal investigators will promise cost sharing without thinking through how to meet the obligation. One suggestion to ward off problems is to require any PI who submits a proposal with cost sharing to also include a cost sharing budget plan that includes the source of the funds and how the funds will be spent. This preplanning not only helps the PI to think through the entire process but also helps the institution, including the PI’s department and school, to clearly see the plan for meeting the obligation. One of the key factors is to ensure that all allowable costs are included in the cost sharing calculation.

**Example**

If a PI states that 10% of his time will be donated as cost sharing on the project, it is important to remember to include the corresponding benefits and F&A costs that normally would have been collected if the salary had been charged directly to the award. In real terms this means that 10% of a $100,000 salary is worth much more than $10,000 in meeting a cost sharing commitment. In fact, it is worth $10,000 plus the corresponding benefits; using a 25% rate, this would add $2,500. In addition, an F&A rate of 50% would add another $6,250. This would bring the value of the cost sharing to a total of $18,750. Using this type of tool at the pre-award stage helps to ensure compliance during the period of award and in reporting the commitments.

Establishing cost sharing accounts is another very effective means of ensuring that cost sharing commitments are met. While there is no regulation requiring separate accounts to capture cost sharing, many institutions require the establishment of separate accounts so that all commitments can be closely monitored. The separate accounts help to ensure that funds are set aside to meet the commitments and only allowable charges are used to meet obligations.
2. Revisions to budget: Subpart D § 200.308 outlines the expanded authorities that institutions have in administering their awards. Many institutions have created forms or electronic methods of recording the revisions and authorizations via some type of prior approval at the central level. This also allows the central sponsored programs office to record notification dates to federal agencies on changes such as no-cost extensions or changes in key personnel. For example, the central office may require the PI to provide information as to what aspect of the award they want to change (e.g., budget? expiration date? addition of a subcontractor?) and a justification to support the change. The central office can determine when it can approve the change internally or when it must seek approval from the funding agency. The documentation then becomes part of the record that can be used to answer questions should they arise during an audit.

3. Notification of expiring awards: One of the most effective tools used to ensure that reporting requirements are met is the use of notices when awards are about to expire. While this tool can take on many forms, it is important that the notices include reminders of technical and financial report due dates and reminders to work with any subrecipients to begin the closeout process. Some institutions include award balance information to make the PI aware of any current overspending or large balances due to late billing by subcontractors or vendors.

The above are merely some ideas to help ensure compliance with the administrative regulations. An institution is encouraged to review the websites of similar institutions to review their policies and procedures and generate additional ideas for managing sponsored awards.

¶1305.9 Importance of the Cost Principles

The cost principles, previously found in A-21, A-87, and A-122, can now be found in Subpart E of the Uniform Guidance. This section gives instructions and guidance as to what types of costs are allowed to be charged to federal awards.

There are two types of costs that must be understood when talking about charging sponsored awards:

◆ Direct costs are defined as costs that can be assigned to a particular sponsored project relatively easily and with a high degree of accuracy.

◆ Facilities and administrative (F&A) costs are those that are incurred for common or joint objectives, and therefore cannot be readily and specifically identified with a particular sponsored project. (It should be noted that F&A costs are also referred to as indirect or overhead costs).

Determining ‘Allowable’ Costs

Subpart E provides guidance in helping to determine if an expense can be charged to a federal award or used in the calculation to determine the recipient entity’s F&A rate. § 200.403 under the heading of Basic Considerations in this Subpart is the best place to start for general guidance in this area.

Subpart E lists a number of factors that should be taken into consideration in
making a determination of allowability, and ask:
◆ Is the cost reasonable?
◆ Is the cost allocable to the project?
◆ Is the cost consistently treated as either direct or indirect?
◆ Is the cost allowable under the Uniform Guidance, the agreement, and the law?

**Reasonable**

“Reasonable” is defined as being necessary for the operation of the project and paying a price that a prudent person would pay for the same item. The government wants the recipient to take precautions to ensure that the government does not pay for unnecessary items or items that are priced much higher than anyone else would pay. Defining what is reasonable can be difficult at times. The following example may be helpful.

**Example**

A recent award called for the purchasing of recording devices for use in recording the dialects of speakers in South America. The devices were to be used by eight different researchers during a site visit; therefore, eight different machines were required. One of the researchers requested a piece of equipment that cost significantly more than the other seven. Was this reasonable? The answer depends on why the researcher wanted the pricier model. Was it personal preference or did the more expensive machine have some functionality that the researcher required to perform a unique type of recording? If the answer was because the researcher simply preferred the more expensive model, it would be hard to justify the expense as allowable. If, on the other hand, it was needed to perform additional types of recordings, it would certainly be considered reasonable.

The key to ensuring that an additional expense is not disallowed in a future audit is to document the requirements at the time of purchase, so that the additional expense can be easily justified if questioned.

**Allocable**

“Allocable” is defined as making sure that the item or service charged to the project benefits the project and advances the work being performed. The Uniform Guidance also states that if the award only benefits from a portion of the purchase (e.g., a bulk order of chemicals), then only a reasonable portion of the cost may be charged to the award. The allocation methodology should be documented and based upon actual usage, or a reasonable determination made by a knowledgeable source, e.g., the PI or lab manager.

Problems in the area of allocability may arise if careful checks are not performed to ensure that the correct project is charged for its fair share of expenses. Take, for example, a large lab with numerous students and postdoctoral researchers working on a variety of research projects at the same time. It is easy to see how it could become difficult to determine how much time each person was devoting to one partic-
ular project, since there is likely to be movement between projects on a regular basis. In fact, it is not uncommon for students to be totally unaware of which project they are working on when they are working under close supervision of a researcher who is merely assigning them tasks to complete. In such cases, it is incumbent upon the research administrator to meet with the PI or project supervisor on a regular basis to review salary charges to ensure that expenses are being allocated to each award based on the work performed.

**Consistently Treated**

The Uniform Guidance also states that costs must be “consistently treated” in similar circumstances. This means that if the institution tells the federal government that the paper and copiers in each department are part of the F&A rate, a department can’t decide to charge the copy expenses directly to a sponsored project unless it can document that the requirements of the award or other circumstances are different than others normally performed by the institution. When the same types of charges are charged directly by one department but are normally considered as part of the F&A rate, the government ends up paying unfairly for the same expense by two different methods. Office supplies are often used to demonstrate this point, as in the following example.

**Example**

Appendix III, Part B Identification and Assignment of Indirect (F&A) costs 6.b.(2) states that office supplies should normally be treated as F&A expenses. But suppose the project involved printing thousands of pages of survey questions to be distributed to test subjects. Clearly it is not a normal business practice to produce surveys, so the cost of the paper and printing of these surveys is easy to justify as a direct cost of the project. The same logic might be used when purchasing a computer on a federal award. Computing devices and peripherals are considered supplies under the Uniform Guidance and therefore should normally be considered an F&A cost. Suppose, however, the computer was going to be used primarily to record the results of a survey and then used to run highly sophisticated statistical analysis on the data. Clearly this is not a general office use and the computer could be justified as a direct charge to the project.

The principle of consistent treatment also refers to the fact that institutions must treat costs the same regardless of who is paying for them. An institution cannot charge more or less for an item only because it is being paid for by the federal government. Charges must be consistent with institutional policies and procedures.

**Allowable**

To be “allowable,” the expense charged to an award must be allowed by the Uniform Guidance, the agreement, and public laws. While this would seem to be a straightforward requirement, it often confuses people, making the decision process as to whether or not the cost is allowable very difficult. For example, advertising...
expenses are listed as both allowable and unallowable in the Uniform Guidance, depending on what kind of advertising and the type of expense. Subpart E § 200.421 states that the government will pay for advertising to help recruit personnel to work on a project and consider the expense to be a direct cost. On the other hand, while expenses for recruiting personnel to work in the office of sponsored programs are also allowable, they are only allowable as part of the calculation of the F&A rate, not as a direct cost. It will not allow advertising expenses for the purpose of the institution’s public relations to be charged as either a direct cost to an award or included as part of the F&A calculation.

In addition, it is important to keep institutional policy in mind: institutions cannot charge recruitment costs to federal awards if it is not within their institutional policy to do so on other funding. This is related to the principle of consistent treatment.

**Direct versus F&A Costs**

Again there are two types of costs that must be understood when talking about charging sponsored awards: direct costs and facilities and administrative (F&A), also known as indirect or overhead costs. Whether a cost is charged directly to a sponsored project or it is used in the calculation of the F&A rate, it must be allowable under the cost principles.

**Selected Items of Costs**

Within Subpart E of the Uniform Guidance is a list of General Provisions for Selected Items of Cost. This is a list of 55 items, activities, and services whose allowability is commonly questioned in relation to sponsored awards. This section attempts to give the user some idea of when it is fair to ask the federal government to pay all or a portion of the costs of an item.

**Review of Allowability**

While the cost section of the Uniform Guidance can be extremely helpful in determining if a cost is allowable, it is also very limited in the guidance it can provide, as only 55 items of costs are discussed. The PI and administrator must rely on the guidance provided in other sections of the Uniform Guidance, as well as the sponsor’s award administration guide, and the terms and conditions of the award itself to determine the allowability of a cost. In other words, to determine: Is the cost allowable under the rules and regulations? Is it reasonable? Does it benefit the project? And finally, is the cost being consistently treated by the entity and either being treated as a direct cost or F&A as appropriate?

If a cost is not listed specifically in the Uniform Guidance as either allowable or unallowable, judgments will have to be made before the expense is charged to the award. It will be extremely helpful in defending the charge in future audits to document the logic used in determining the allowability of the cost and the benefit it provided to the project(s). While the Uniform Guidance attempts to give guidance, it is not possible to anticipate every single circumstance where an item of cost may come into question. For example, the Uniform Guidance clearly states that alcohol is not allowed to be charged to federal awards (§ 200.423). However, what if the research
experiment being conducted concerns the effects of alcohol on teenage drivers? The award would clearly state the need for purchasing alcohol, making it allowable. However, it would not be reasonable to purchase the most expensive brand. In determining allowability it might be important to ask the following questions:

◆ Would the institution pay this price if it were spending its own money?
◆ How is the purchase or acquisition of this service benefiting the project?
◆ Is this a routine cost that is normally covered by F&A? If so, what makes these circumstances so different from others that this expense should be allowed to be charged directly? ²
◆ Would the cost be easy to explain to a newspaper reporter?

The following real-life example illustrates the need to use judgment when deciding if a cost is allowable:

Example

The central sponsored programs office of a large university received a call from a department asking permission to charge 100 bicycle horns to a federal research project. The office’s immediate reaction was to answer a resounding no! But upon further investigation, it was discovered that the horns were being used in a hearing and speech experiment and were needed because the horns could produce a sound at the perfect pitch needed to test certain types of hearing. There is no place in the Uniform Guidance, or, indeed, in the sponsor’s award administration guide, where bicycle horns are discussed as an allowable cost. Therefore, the research administrator is forced to use the test of reasonable, allocable, and allowable. Obviously the horns in the circumstance were perfectly legitimate expenses on this project.

This example is also a case where the institution might choose to reach out to the federal sponsor and obtain prior written approval for a particular item of cost.

¶1305.10 Ensuring Compliance with the Cost Principles

How can the institution ensure that it is in compliance with the cost principles? In a perfect world each institution would have a staff of well-trained experts in the cost principles, whose sole job would be to review each and every expense to ensure that it complies with the Uniform Guidance before it is charged to an award. However, with shrinking budgets and the government cap on administrative costs at 26 percent, no institution can afford this type of scrutiny. Each institution must put policies and procedures in place to ensure its organization is complying with the rules.

Accomplishing this goal can be achieved in a variety of ways, such as those discussed below.

² See Appendix III Part B Identification and Assignment of Indirect (F&A) costs for more information.
Conducting Staff Training

There is no more important first step in ensuring compliance with cost principles that any organization can take than training its staff. Research administrators and principal investigators must understand the rules to ensure that sponsor funds are used properly. While training can take various forms and include a variety of content, the simple concepts of allowable, allocable, and reasonable must be emphasized when educating others on the cost principles. While it is often difficult to convince busy principal investigators to attend training sessions, it is vital that the administrators on the front lines in departments, labs, and centers are made aware of the regulations so that they can take on the responsibility of keeping the PI informed on issues of compliance with the cost principles.

Reviewing ‘High-Risk’ Transactions

While reviewing every transaction is not possible, organizations should consider establishing methods for reviewing transactions that are likely to raise compliance issues. There are many approaches to this process, including the following:

1. Review all transactions above a certain dollar threshold. This can be accomplished by running reports in the financial system that will reveal costs over some predetermined dollar amount, for example, $5,000, a typical capitalization level. This after-the-fact review will allow for in-depth analysis of these transactions. The reviewer can ask questions or examine documentation to determine the allowability of the cost. Since the capitalization level is the point at which an item is considered to be equipment and not a material or supply under the Uniform Guidance, for many organizations, a limit this high would catch equipment or other capital expenditures that should have been budgeted for in an award proposal and approved by the sponsor during the award process. (It’s not necessarily unallowable to spend money on capital equipment not originally budgeted, but it depends on the sponsor. Some sponsors under a grant make an institution officially request and get approval prior to the purchase of capital equipment. Most contracts require an institution to get permission in advance.)

2. Reviewing the transfer of expenses on sponsored awards is one of the tried-and-true methods of determining compliance with the cost principles. If every expense charged to an award has been affirmed as an allowable cost to that project, to initiate a cost transfer indicates that the initial affirmation was incorrect. Auditors are particularly interested in transfers because it is believed they are an indicator of how well sponsored programs are managed. While it is understood that errors can occur, regularly moving expenses could be an indication of the lack of adequate controls at both the department and institutional levels. In fact, Subpart E § 200.405(c) specifically addresses transferring expenses between awards because of overspending. It states, in part, that “any cost allocable to a particular Federal award ... may not be charged to other Federal awards to overcome fund deficiencies.”

Transfers should be well documented and such documentation should clearly state why and how the error occurred. Auditors have become increasingly impatient
with short-cut explanations such as “to correct the error” or “to place the expense where it belongs.” The National Institutes of Health Office of Extramural Research grants manual states that explanations such as these are not sufficient to support the costs and therefore the expense could be determined to be unallowable.³

The review of transfers, normally done at the central level, allows the institution to review the expense for reasonableness and timeliness and to ensure the documentation is strong enough to support the charge. Those initiating the transfer should be instructed to write explanations that answer the question: “Why is this award being charged for this expense?” Transfers that don’t meet the criteria can be returned for more supporting documentation or rejected immediately, eliminating the threat of audit findings months or years down the road.

1. Review all expenses charged to sponsored projects during the last few months of the award or after the award expired. This review could determine if expenses were “dumped” onto an award merely to use up available funds or spend what is sometimes viewed as “extra money.”

2. With improvements in technology, more automated financial systems with better reporting tools, and savvy auditors, these last minute or after-the-award charges are extremely low-hanging fruit for auditors. Research administrators should provide explanation and justification for these costs at the time of purchase, so when these costs are inevitably audited the institution can show a thoughtful, intentional decision process in last minute or after-the-award charges.

3. A review by object or “subcode” is a proven method of finding potential audit problems. This method allows the central office to search the financial records for expenses charged to awards in categories that the regulations state are either unallowable or should normally be treated as F&A costs. Categories for review might include general office supplies, food and entertainment, clerical salaries, and local telephone charges. If charges are found for these types of expense, budgets and other documentation can be reviewed to determine if the charges can be supported or the expense should be removed, again eliminating potential audit findings in the future.

4. Foreign travel is not prohibited under the cost Uniform Guidance, but the “Fly America Act” prohibits using federal funds to travel on non-U.S. air carriers except under clearly defined circumstances. Furthermore, many federal agencies require specific permissions to travel outside the United States on an award. Therefore, many organizations routinely review all foreign travel prior to the departure of the traveler to make sure the trip and the method of travel are compliant with the myriad regulations.

Internal Audits

Using internal audits allows the institution to police itself by randomly auditing for the full range of compliance issues or to address specific problem areas. (See Chapter 3100 for more information on internal audits and Chapter 3900 for a discussion of using them as forms of assessment.)

¶1305.11 Audit Requirements

The purpose of Subpart F is to set down guidance so that all Federal agencies and, subsequently, auditors hired by the recipients of Federal funds audit consistently for the same things in roughly the same manner. The subpart, in concert with the Compliance Supplement issued as appendix XI is in essence the instruction book for auditors. The subpart does not apply to non-U.S. recipients of federal funds either directly or as a subawardee. (See Chapter 3100 for additional information on audits and interacting with auditors.)

It is important to note that the single audit (formerly known as the A-133 audit) is a risk-based audit, meaning the larger the program dollars spent, the more likely the program is to be audited. Also, if a prior audit found problems, the auditors are likely to spend time testing to see if corrective actions have been put into place. Finally, the auditors will devote resources to test new systems or procedures to ensure they are working properly. For example, if an organization implements a new payroll system, the auditors will devote resources to testing that system in its first year of operation to ensure that the government is being fairly charged for its portion of payroll and employment taxes.

This Subpart is divided into five sections, which allow the user to quickly identify the proper section.

◆ Audits § 200.501-200.507
◆ Auditees § 200.508-512
◆ Federal Agencies § 200.513
◆ Auditors § 200.514-55
◆ Management Decisions § 200.521

General Requirements of Subpart F

The purpose of Subpart F is described in § 200.500. Some of the most important definitions referenced in this section are included below, but can be found earlier in the Uniform Guidance in Subpart A.

Uniform Guidance, Subpart A

§ 200.10 CFDA number means the number assigned to a Federal program in the Catalog of Federal Domestic Assistance (CFDA).

§ 200.26 Corrective action means action taken by the auditee that:

1. Corrects identified deficiencies;
2. Produces recommended improvements; or
3. Demonstrates that audit findings are either invalid or do not warrant auditee action.

§ 200.61 Internal control means a process, implemented by a non-Federal entity designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

1. Effectiveness and efficiency of operations;
2. Reliability of reporting for internal and external use; and
3. Compliance with applicable laws and regulations.

§ 200.74 Pass-through entity means a non-Federal entity that provides a subaward to a subrecipient to carry out part of a Federal program.

§ 200.84 Questioned cost means a cost that is questioned by the auditor because of an audit finding:

1. Which resulted from a violation or possible violation of a statute, regulation, or the terms and conditions of a Federal award, including for funds used to match Federal funds;
2. Where the costs, at the time of the audit, are not supported by adequate documentation; or
3. Where the costs incurred appear unreasonable and do not reflect the actions a prudent person would take in the circumstances.

The important part of the Audit Requirements section of Subpart F is the discussion of the expenditure threshold for those subject to audit. As of December 2014, the limit was set at $750,000 per year of expenditures for Federal awards, based on the non-Federal entity’s fiscal year. Smaller organizations must monitor this threshold carefully to ensure they are compliant with this regulation as their Federal awards and expenditures grow. Recipients must also be aware of this threshold, because if they issue subawards to small nonprofits, they must have an understanding of who is subject to these auditing rules.

**Single Audit Concept**

Congress enacted the Single Audit Act of 1984 to establish uniform audit requirements and an organizationwide audit process for state and local governments. Prior to this act, each federal agency was responsible for auditing its own awards. Audits were not coordinated, causing overlap in auditing some recipients, while other recipients were never audited at all. In 1996 the act was amended to make the statutory audit requirements applicable to nonprofit organizations, therefore placing states, local governments, universities, and nonprofits under the same audit process.

**Auditee Responsibilities**

Sections 200.508-512 are most important to central administrators in the finance or comptroller’s office because they explain exactly what the organization is respon-
sible for in ensuring that an audit occurs and that auditors are given the correct information, such as the financial statements and a listing of all the federal funds expended by the organization.

The auditee has responsibility for the following items:

1. Procure or otherwise arrange for the audit in accordance with § 200.509 and ensure it is properly performed and submitted in accordance with § 200.512 (i.e., either 30 days after receipt of the auditor’s report or nine months after the end date of the audit period, whichever occurs first).

2. Prepare appropriate financial statements, including the schedule of expenditures of Federal awards in accordance with § 200.510.

3. Promptly follow up and take corrective action on audit findings, including preparation of a summary schedule of prior audit findings and a corrective action plan in accordance with § 200.511.

4. Provide the auditor with access to personnel, accounts, books, records, supporting documentation, and other information as needed for the auditor to perform the audit as required by this part.

Federal Agency Responsibilities

Section 200.513 describes what the federal awarding agency is responsible for as well as how the cognizant audit agency is determined. In short, a cognizant federal audit agency is required if the recipient expends more than $50 million per year in federal funds, and the cognizant agency is determined by which agency had the predominant amount of expenditures in the fiscal year by the recipient. This section goes on to identify the federal awarding agency responsibilities (additional information can be found in § 200.210):

1. Ensure that audits are completed and reports are received in a timely manner and in accordance with the requirements of this part.

2. Provide technical advice and counsel to auditees and auditors as requested.

3. Follow-up on audit findings to ensure that the recipient takes appropriate and timely corrective action. As part of audit follow-up, the Federal awarding agency must

   (i) Issue a management decision as prescribed in § 200.521.

   (ii) Monitor the recipient taking appropriate and timely corrective action;

   (iii) Use cooperative audit resolution mechanisms (see § 200.25) to improve Federal program outcomes through better audit resolution, follow-up, and corrective action; and

   (iv) Develop a baseline, metrics, and targets to track, over time, the effectiveness of the Federal agency’s process to follow-up on audit findings and on the effectiveness of Single Audits in improving non-Federal entity accountability and their use by Federal awarding agencies in making award decisions.

This section further goes on to discuss the Federal agency responsibilities for re-
porting to OMB to ensure the compliance supplement provides sufficient guidance to auditors and focuses on the issues most likely to cause fraud, waste, and abuse.

**Auditor Requirements**

Research administrators should be aware of how the audit will be conducted and what auditors will be looking for during the process, as outlined in this section. The auditors will begin the audit by reviewing the institution’s financial statements to determine if they fairly represent the institution’s financial picture according to generally accepted accounting principles. Then they will make sure that federal expenditures are properly represented in the statements. Once that is accomplished, the auditors will review the following:

- Internal controls
- Compliance
- Audit follow-up

**Internal Controls**

The auditors will select transactions in the accounting system to make sure they were properly authorized, reviewed, and posted to the federal award in accordance with the policies of the institution. They will be particularly interested in cash transactions, payroll, and large purchases to make sure that no one person in the process had complete control. Separation of duties helps to ensure that risk of fraud or embezzlement is minimized.

**Compliance**

The auditors will review numerous transactions posted to federal awards to ensure that they comply with the Uniform Guidance, program regulations, and sometimes the OMB circulars. (As mentioned previously, despite the fact that the Uniform Guidance has been in effect for several years, depending on the way the Federal agencies have decided to implement the Uniform Guidance, some awards may still be subject to the OMB circulars. It is important for the recipient institution to be aware of which regulations awards fall under, and to document decisions accordingly.) The methods used for this review will vary by auditor. They may use the documentation supplied by the auditee to justify the expenditure or they may even interview the PI to make the determination. The following is the list of compliance items that are reviewed during the audit.

**A. Activities Allowed or Unallowed.** There are certain types of activities that are expressly unallowable when using federal funds, including such things as fund-raising and lobbying. The auditors will review the financial statements and federal awards to make sure that these costs are properly recorded and not charged directly or indirectly to federal projects.

**B. Allowable Costs/Cost Principles.** The Uniform Guidance Compliance Supplement (located in Appendix XI) defines the criteria for how costs are audited as follows:

1. **Reasonable and necessary:** Costs must be reasonable and necessary for the performance and administration of federal awards.
2. *Allocable:* Costs must be allocable to the federal awards in accordance with relative benefits received.

3. *Consistency:* Costs must be given consistent treatment, meaning a cost may not be assigned to a federal award as a direct cost if any other cost incurred for the same purpose in like circumstances was allocated to the federal award as an indirect cost.

4. *Conformity to laws, regulations, and sponsored agreements:* Costs must conform to any limitations or exclusions set forth in the Uniform Guidance, Federal laws, state or local laws, sponsored agreements, or other governing regulations as to types or amounts of cost items.

5. *Transactions that reduce or offset direct or indirect costs:* Costs must be net of all applicable credits that result from transactions that reduce or offset direct or indirect costs. Examples of such transactions include purchase discounts, rebates, or selling services such as utilities or copy and e-mail services.

6. *Costs documentation:* Costs must be documented in accordance with the Uniform Guidance.

7. *Applicability:* Costs must be applied uniformly to Federal and non-Federal activities.

8. *Rates:* With respect to fringe benefit allocations, charges, or rates, such allocations are to be based on the benefits received by different classes of employees within the educational institution.

**C. Cash.** Since the majority of awards made by the federal government are cost reimbursable, auditors test to make sure that the entity actually spent the money before requesting repayment from the government. If advances were absolutely required, they test to make sure that funds are used as quickly as possible and that interest is paid on any government funds that were received in advance.

**D. Davis-Bacon Act.** The auditor reviews payroll documentation to ensure that if federal funds were used for construction, repairs, and alterations to buildings, construction workers and machinists were paid Department of Labor prevailing wage rates.

**E. Eligibility.** Tests are done to ensure that only people or organizations that were eligible under the laws and regulations received government funds. For example, did students who received federal work-study funds meet the requirements of the program?

**F. Equipment and Real Property Management.** Basically the Property Standards section of Subpart D require that equipment be used in the program for which it was acquired or, when appropriate, other federal programs. Equipment records should be maintained; a physical inventory of equipment must be taken at least once every two years and reconciled to the equipment records; an appropriate control system should be used to safeguard equipment; and equipment should be adequately maintained.

**G. Matching, Level of Effort, Earmarking.** The auditors will test to see if cost sharing commitments were met, the claimed cost sharing was documented, and
all the costs were allowable. Remember that if an item is unallowable as a direct cost, it is unallowable as part of a cost share commitment.

**H. Period of Availability of Federal Funds.** Random tests are done to make sure the expenses are not charged to the federal award after the award has expired. The auditors will look at any transaction that posts after the expiration date and determine if the obligation existed prior to the award ending. For example, it is reasonable to pay a contractor or subrecipient who sends a final invoice after work is completed, but an auditor would question equipment purchases or payroll charges after the expiration date.

**I. Procurement and Suspension and Debarment.** Auditors will make sure that the purchasing policies of the entity comply with federal law and then test to see that those policies are followed. Research administrators must be aware that if they use “purchasing cards” (p-cards) when buying supplies for federal awards, the same procurement policies apply. Auditors will also test to make sure there is due diligence to ensure that no purchases were made or subawards issued to persons or organizations that have been suspended from doing work with the federal government.

**J. Program Income.** Auditors will check to see if program income was properly reported and used in one of the three ways allowed by the regulation: added to the project budget, used to meet matching requirements, or deducted from the total award amount.

**K. Real Property Acquisition and Relocation Assistance.** This section deals with treating people fairly if they have been displaced from their homes or business by a federal program. This section would normally only apply to states that use federal funds to build such things as roads, which may require the state to take property from people or business.

**L. Reporting.** Research administrators responsible for invoicing or drawing funds from federal letters of credit will want to review the Compliance Supplement in detail to gain a complete understanding of how financial reporting will be audited. Basically auditors will check to see if proper procedures were followed when requesting funds from the federal government and all reports were completed accurately and on time.

**M. Subrecipient Monitoring.** When a university, state government, or nonprofit organization makes the decision to subaward a portion of a project to another organization, it takes on a significant amount of risk and responsibilities. The federal government expects the prime recipient to watch over the subrecipient to make sure it is performing the work as promised and it is fiscally responsible with federal funds. Auditors will want to fully understand how this is being accomplished and will ask to review progress and financial reports from subrecipients to ascertain if sufficient oversight is being given. Research administrators should make sure that before any invoice from a subrecipient is paid, the PI reviews it to ensure it fairly represents payment for the work performed.
N. Special Tests and Provisions. Unique federal programs may require special tests to ensure compliance. If a research administrator is doing work on such a project, they should be aware that auditors may want to do very specialized reviews of that program.

Audit Follow-Up
Auditors are required to review audits from the previous year or any other audits performed during the year. This could include property audits, procurement system audits, state audit reports, or a program audit. If there were findings in any of those audits, the auditors will review the corrective action taken to ensure that the new policies or procedures are being followed and have corrected the problem.

¶1305.12 Ensuring Audit Readiness
How can an institution ensure that it is prepared for the audit and ensure that those institutions with which it has subagreements are in compliance with federal regulations? As the discussions above explain, the keys to having a successful audit are having in place strong policies and procedures and regular monitoring of awards to spot potential problems before the audit. In addition, there are steps that can be taken to help an institution ensure that it is audit-ready.

1. Keep files and documentation updated with key information. While this may seem obvious, it has been the downfall of many institutions because the auditees are not able to provide documentation to justify expenses. A prime example of this problem can be seen in p-card procurements. Often receipts and other documentation are maintained in files specifically for p-card purchases and not in the files that support the award expenditures. While there is no right or wrong method for maintaining these records, there must be clear audit trails within these files to ensure that documentation can be easily located.

2. Insist on clear written explanations of transfers or purchases during the life of the award. Requiring clear and concise documentation to support expenses as they occur eliminates the need to try to recreate something months or years down the road. Many universities will reject cost transfers at the central level until the documentation to support the charge is in order.

3. Verify that expenses are properly authorized. While this speaks to strong internal controls, central offices can review transactions continuously to ensure that only authorized persons are approving expenses.

4. Get CFDA numbers at the pre-award phase. The single audit requires that federal assistance awards be identified by CFDA number. Prior to the Uniform Guidance, this number was often omitted from the award document by the awarding agency or the prime recipient when issuing a subaward, however now that this is a required piece of information in the notice of funding opportunity (see § 200.203), all awardees should have this information in advance. Making it a practice of getting the necessary information at the award stage (or even the proposal stage!) eliminates the need for searching for dozens of numbers just prior to the auditors’ arrival.
Subrecipient Monitoring

As a recipient of federal funds, an institution will likely enter into subagreements (grants, cooperative agreements, or contracts) with other entities who participate in doing work for the government. Under the Federal regulations the pass-through entity is required to provide at least minimal oversight to assure the government that the entities it is subawarding to are in compliance with federal regulations.

Monitoring subrecipients can be done on many levels. The first step in determining the level of scrutiny a subrecipient should receive is to determine the level of risk the entity represents. While the assessment can be based on many criteria, some factors are:

1. Consider the size of the subaward. Often the higher the dollar volume, the higher the risk.
2. Consider the size of the entity and its length of time in business. Small start-up companies should be considered very high risk as the failure rate for start-up businesses is high.
3. Past performance of the entity should be reviewed. If there were complications with past agreements, such as failure to meet deadlines, late reports, or lack of cooperation in the research — or other indicators of noncompliance — this is clearly a high-risk entity.

The higher the risk, the tighter the controls in place should be to ensure that the subrecipient is complying with all federal regulations. Higher-risk entities might be required to provide extensive documentation to support invoices or need close monitoring of performance by the principal investigator.

Subrecipient Single Audit Reports. An absolute requirement of Subpart F is verifying that all subrecipients who meet the financial threshold outlined in § 200.501 have completed their single audit within nine months of the closing of their fiscal years. There are a number of methods that can be used to verify this information. Five practical ideas are listed below:

1. Create a database of the entities the institution subawards with so that it can record the latest audit information and eliminate duplication should the institution enter into another agreement with the same entity later in the same year.
2. Use the information in the database to send annual certification letters to all subrecipients asking them to attest to the fact that their audit was completed and indicate any audit findings.
3. Create a certification as part of all subaward renewals that states the subrecipient has completed its single audit and that any reportable conditions will be disclosed. Record these certifications in a database.
4. Check the Federal Audit Clearinghouse (FAC) online at http://harvester.census.gov/sac/ to verify the entity completed its single audit report in a timely manner and there were no audit findings, and document the search results.
5. Request a copy of the subrecipient’s audit report. It should be noted that many institutions now provide audit report information on their websites so that it can be accessed at any time.
Audit Findings. If the subrecipient indicates that there were audit findings, the next step is to determine the severity of the finding so that the institution can assess how the finding may affect the institution’s ability to continue to manage its sub-agreements. In order to do this, an institution should be familiar with the following audit terms that are used to describe audit findings:

◆ Reportable condition: internal control deficiency

◆ Material finding (weakness): noncompliance with applicable laws, regulations, or agreement terms and conditions of a substantive nature

◆ Immaterial finding (weakness): noncompliance with applicable laws, regulations, or agreement terms and conditions of an inconsequential nature

◆ Questioned cost: level of uncertainty or doubt as to allowability or appropriateness

To ensure that the institution has all the facts surrounding the audit finding, it may be best to obtain a full copy of the single audit so that it can have all available information in making an assessment. Material issues of noncompliance or reportable conditions related to internal controls are serious concerns. As the pass-through entity, it is important for the institution to obtain a corrective action plan from the subrecipient. After reviewing the plan, the situation should be discussed with the PI and a plan of action must be determined to ensure that the subrecipient is monitored closely throughout the project period. If, after a subaward is issued, the subrecipient is unwilling or unable to comply with the regulations, sanctions such as withholding payment or termination of the award may become necessary.

¶1305.13 Facilities and Administrative (F&A) Rate Calculation

The science of calculating administrative cost rates can take years to fully understand, but in its simplest form, the calculation is an attempt to fairly distribute the cost of running a state, university, hospital, or nonprofit recipient institution to each of the major functions that the entity performs. Appendices III, IV, and V of the Uniform Guidance give instructions on how to calculate these rates so the government pays its fair share of the expenses.

The expenses that are covered under the F&A rate include facilities costs, such as utilities and ground maintenance, and the cost of running the library, and administrative costs, such as central payroll offices, purchasing and procurement offices, the personnel department, accounting, departmental administrators, and the sponsored programs office. These expenses can be compared to what most organizations would characterize as the cost of doing business. They are real expenses of the institution and the reimbursement of these costs is key to maintaining a strong research infrastructure. (See Chapter 1700 for a full discussion of F&A rates.)

¶1305.14 Conclusion

Understanding what really matters in the Uniform Guidance can be a daunting task, but it is critical. In order to be good stewards of federal funds, research administrators must study the regulations and overarching principles of reasonableness, allow-
ability, and allocability when making judgments on the validity of expenses charged to federal awards. Coupled with this knowledge must be sound business practices that ensure accountability and strong controls over federal funds. Finally, a research administrator must prepare for audits during the entire award cycle, from preparing the budget to closeout.
1320 Supplementary Material

This section includes expanded coverage of topics relating to the regulatory environment surrounding sponsored research administration. These materials are culled from a variety of authoritative sources.

1320.1 Overview of the Compliance Supplement

Appendix XI of the Office of Management and Budget (OMB) Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (“Uniform Guidance”) contains its Compliance Supplement. The Compliance Supplement is an instruction book for auditors to assist them in performing the required audits under Subpart F of the Uniform Guidance. In the absence of the supplement, individual auditors would have to research and determine which laws and regulations could have a direct and material effect on a program. In creating the Compliance Supplement, OMB and the many federal agencies providing information to OMB present a source of information for auditors to understand the federal program’s objectives, procedures, and compliance requirements relevant to the audit, as well as audit objectives and suggested audit procedures to be used in determining compliance with the requirements. Likewise, for colleges and universities that must conduct a Single audit, the Compliance Supplement provides guidance on what compliance requirements their auditors will be reviewing.

(For a discussion of the auditing requirements of the Uniform Guidance, see ¶1305.11-14. For a discussion of interacting with auditors, see Chapter 3100.)

Part 2 of the supplement contains a “Matrix of Compliance Requirements” that identifies the federal programs and compliance requirements addressed in the supplement and correlates the program, by Code of Federal Domestic Assistance (CFDA) number, with applicable compliance requirements. The matrix addresses audit requirements in 14 different federal grant-related requirements that generally apply to all, or most, federal grants (see ¶1305.11).

The Compliance Supplement is revised annually, usually each spring. With each annual version, the size of the supplement increases as more program-specific compliance requirements are included. Research administrators are advised to ensure that auditors are using the correct version of the Compliance Supplement when conducting an audit for an institution. To view the full text of the revised supplement (and any recent changes), visit www.whitehouse.gov/omb/circulars/.

Clusters of Programs. OMB and the federal Inspectors General introduced the concept of “cluster of programs” into the Compliance Supplement, as it is generally thought that while there may be differences between the programmatic objectives of individual federal programs, there is much similarity in the underlying compliance objectives. Accordingly, OMB determined that such similar programs could be treated as a single program for major program determinations and for sampling purposes. One such cluster, for Research and Development, was introduced in 1997 and has remained in each annual supplement since then.
§1320.2 Using the Federal Audit Clearinghouse

Since the initial implementation of the Single Audit Act of 1984, the Office of Management and Budget (OMB) has relied on the U.S. Census Bureau for certain data collection activities. The bureau established the Federal Audit Clearinghouse (FAC) to carry out such responsibilities. The FAC serves as the repository for the Form SF-SAC, “Data Collection Form for Reporting on Audits of States, Local Governments, and Non-Profit Organizations” and the single audit reporting package. (For a full discussion of the auditing requirements see ¶1305.11.)

The FAC compiles the data contained in the single audit package and provides that information, along with other appropriate information about the auditee, its audit report, and federal programs to awarding agencies.

The FAC “operates on behalf of” OMB to

◆ disseminate audit information to federal agencies and the public;
◆ support OMB oversight and assessment of federal award audit requirements;
◆ assist federal cognizant and oversight agencies in obtaining Circular A-133 data and reporting packages; and
◆ help auditors and auditees minimize the reporting burden of complying with Circular A-133 audit requirements.

Single Audit Database

The FAC maintains a searchable database of information derived from the SF-SACs. An institution should be sure to use the correct SF-SAC version that corresponds to the reporting year.

In general, Form SF-SAC and the database provide five kinds of information:

◆ General Information
◆ Auditee Information
◆ Auditor Information
◆ Financial Statement of Audit Information
◆ Financial Program Information

Reminder
Clearinghouse is https://harvester.census.gov/facweb. To access the single audit database from this site, click the icon at the bottom of the page that says “Find Audit Information.”
Late Filing

According to Uniform Guidance Subpart F, the audit shall be completed and the
data collection form and reporting package shall be submitted by the earlier date of
either 30 days after receipt of the auditor’s report(s), or nine months after the end of
the fiscal year end date, unless a longer period is agreed to in advance by the cognizant or oversight agency for audit.

The FAC is not authorized to grant extensions of the deadline for filing single audit submissions. The auditee institution should contact their cognizant/oversight agency to request an extension. Federal agency contact information can be obtained from http://harvester.census.gov/fac/APPX3.htm.

An OMB task force has been considering the topic of late submission of audit reports to the FAC, and the preliminary recommendation of the task force is to deny low risk auditee status to any entity that submits the report to the clearinghouse late. The concern is that late submission may be due to underlying problems with management and internal controls that are not addressed in the report.

Figure 1320.2-1: Flow Chart of Funding/Audit Reporting
Figure 1320.2-2: Selected Items from the FAC FAQs
Certifying:
Q: Who should sign/certify the form?
A: According to the OMB Circular A-133, §...320 (b), and Uniform Guidance, 2 CFR 200.512 (b), a senior level representative of the auditee and the auditor must sign the form. Electronic signatures are accepted for submissions as of 2008.

Submission Requirements:
Q: Is my organization required to conduct a Single Audit?
A: According to the OMB Circular A–133, Subpart B–Audits §...200(a), and Uniform Guidance, 2 CFR 200.501(a), non-Federal entities that expend $500,000 ($750,000 for fiscal years beginning on or after December 26, 2014) or more in a year in Federal awards shall have a single or program-specific audit conducted for that year in accordance with the provisions of these parts. Guidance on determining Federal awards expended is provided in §...205 and 2 CFR 200.502. Please see §...205 and 2 CFR 200.502 for information regarding loans as expenditures.

Deadlines
Q: When are the Form SF-SAC and the Single Audit reporting package due?
A: The audit package and the data collection form shall be submitted 30 days after receipt of the auditor’s report(s), or 9 months after the end of the fiscal year — whichever comes first. See OMB Circular A-133 §...320 (a) and Uniform Guidance 2 CFR 200.512(a) for additional information and exceptions.

Q: How do I request an extension on the due date?
A: Federal agencies no longer grant extensions for Single Audit submissions. If the auditee or auditor wishes to inform the Federal agency they will be late, he or she may do so by contacting the Federal Oversight or Cognizant Agency for the audit. (Link: https://harvester.census.gov/facides/files/agencycontact.pdf)

Please refer to Item 7, pages 5 & 6 of the OMB Memorandum M-10-14 for additional guidance regarding extensions. (Link: https://www.whitehouse.gov/sites/default/files/omb/assets/memoranda_2010/m10-14.pdf)
**Subrecipient Monitoring**

To assist in making subrecipient monitoring easier, the audit supplement to the Uniform Guidance has incorporated use of the Federal Audit Clearinghouse to determine the Single Audit status of subrecipients. As such, sponsored research administrators should make sure pertinent staff members are trained in using and understanding information in the clearinghouse.

To document that there are no negative audit findings impacting the subrecipient’s management of grants that might affect the subaward, one could make a copy of the FAC information and insert it either electronically or on paper into the subaward file and mark any subaward database accordingly. If there is a finding, an institution should be sure to follow up with the subrecipient institution to ensure corrective action is being put into place and document the action. (For more on subrecipient monitoring, see Chapter 3700.)

**Public Availability of A-133 Audits**

Buried in Sec. 5.8 of the OMB April 3, 2009, guidance on funding under the American Recovery and Reinvestment Act (ARRA) is a statement that, “For fiscal years ending September 30, 2009 and later, all Single Audit reports filed with the Federal Audit Clearinghouse (FAC) will be made publicly available on the internet” (see www.whitehouse.gov/omb/assets/memoranda_fy2009/m09-15.pdf).

Single audits are currently available to the public under the Freedom of Information Act, but FAC’s policy has been to refer such FOIA requests to the cognizant agency responsible for the report, so that the agency can remove any personally identifiable information (PII) in the report before release. A footnote in the OMB guidance justifies this public release requirement and suggests ways for the FAC to avoid disclosure of any PII.
1320.3 Reviewing NIH Award Oversight and Audits of Funding

In *National Institutes of Health Extramural Research Grants: Oversight of Cost Reimbursements to Universities*, the Government Accountability Office (GAO) examined how the National Institutes of Health (NIH) oversees its extramural research grants at approximately 530 colleges and universities that are the recipients of these funds (GAO-07-294R; link: http://www.gao.gov/new.items/d07294r.pdf). A look at the GAO’s findings can provide an instructive review for research administrators of agency use of controls for oversight of grant awards.

Because a major part of NIH oversight activities involves either single audits, as required by the Uniform Guidance Subpart F (formerly OMB Circular A-133), or audits of NIH funds conducted by the Department of Health and Human Services (HHS) Office of Inspector General (OIG), GAO reviewed 109 single audits from FY 2003 and 2004 and nine OIG audits from FY 2003 through 2006, all of which had findings requiring NIH resolution.

Single audits, which are required for institutions expending $750,000 (up from $500,000 under A-133) or more in federal funds in a given year, examine financial statements, internal controls, and compliance with laws and regulations pertaining to federal programs on an organization-wide basis. The OIG audits, on the other hand, scrutinize an institution’s use of NIH funds more narrowly, often in relation to a particular grant or a particular risk area.

The GAO report does not draw any conclusions with regard to the adequacy of the NIH oversight to protect federal funds; instead, it simply describes NIH’s process in great detail and provides examples.

Findings Must Be Addressed

Although the scope of each type of audit differs, the audits may report similar findings. Findings common to both A-133 audits (now Single Audits) and OIG audits were

- unallowable costs;
- incorrect accounting for indirect costs;
- allocation of costs to the wrong grants; and
- insufficient monitoring of subrecipients.

According to the report, NIH requires universities to address all findings and to reimburse questioned costs unless sufficiently justified. Because many single audit findings are nonmonetary, such as inadequate documentation of costs or insufficient subrecipient monitoring, Uniform Guidance Subpart F requires universities to submit a corrective action plan to the agency, and NIH policy requires corrective action plans for any OIG findings. GAO confirmed that NIH had obtained the requisite documentation from the universities to corroborate that the problems had been addressed.
Recovery of Questioned Costs

GAO found that NIH’s recovery of questioned costs varied, depending on whether the costs were questioned in single audits or in OIG audits. For single audits with monetary findings, NIH said that the agency usually obtains the full amount of the questioned costs. GAO reviewed three single audits reporting monetary findings; two of these had questioned costs totaling less than $5,000, and both were repaid.

The third report questioned over $150,000 included in the calculation of the university’s indirect cost rate; at the direction of NIH, the rate was renegotiated and reduced by 3 percent for the following year. Resolution of monetary findings in OIG audits, on the other hand, was much more likely to result in recovery of smaller amounts than those questioned. The OIG reports questioned about $1.5 million (12 percent of the funds under audit), and NIH recovered just over $850,000, or about 56 percent of the questioned costs. NIH explained that the large discrepancy between questioned and recovered costs in OIG audits occurs because of the process it follows to make its final determination.

Audit Determination Letter

If a grantee disagrees with the agency’s resolution of an audit, NIH issues an audit determination letter specifying the amounts, including accrued interest, to be returned by the grantee and any corrective actions the grantee must take. Grantees can appeal this audit determination, but NIH noted that very few audit determination letters are ever issued because the universities and NIH nearly always come to agreement on resolution of the audit.

Compliance Controls

Congress also had asked GAO to examine NIH’s controls for ensuring that grantees comply with federal requirements in claiming costs under NIH grants. GAO determined that these key controls included the review of information submitted by universities when they are negotiating indirect cost rates, when they apply for grants, and when they submit annual grant progress reports.

Oversight of direct cost reimbursement is conducted by the staff of the NIH institute or center (IC) that granted the funds. The ICs examine grant applications to assess the reasonableness of the proposed budget relative to the scientific research the university plans to undertake. They examine the application budget to make sure that costs are necessary, reasonable, and allowable; they also look for budgetary overlap, where costs may be charged to more than one source of funding. The ICs also review the annual status reports to determine whether the university is expending funds as planned and whether the university is managing its grants consistent with the scientific progress that has been made. These reviews determine whether or not the grantee should continue to receive funding under the grant.

Indirect (F&A) cost rates are negotiated and established by the HHS Division of Cost Allocation (DCA). Based on risk assessments, DCA conducts more extensive reviews of certain grantees, including on-site reviews, and examines cost accounting practice disclosure statements of the largest grantees.
GAO also reported the trends in indirect costs claimed for NIH research grants during FY 2003 through 2005, which it concluded remained stable throughout the period at about 28.5 percent.

In its response to a draft of GAO’s report, HHS indicated that, in addition to the key controls discussed in the GAO report, it also uses several others to oversee costs claimed by universities. Specifically, HHS mentioned ICs’ use of the terms and conditions of the grant and prior approval requirements, the NIH Office of Financial Management’s review and approval of financial status reports, and the HHS Division of Payment Management’s reconciliation of federal cash transaction reports.
1320.4 Importance of Standard Research Terms and Conditions

A grant or cooperative agreement generally will adopt, often by reference, standard provisions associated with programmatic and administrative regulations that apply to the award as well as other sources of legal authority that a recipient must follow as a condition of receipt of federal funds. These standard provisions mirror the assurances that were provided by an applicant during the pre-award stage and often restate those responsibilities. It is also important to be cognizant of the agency regulations that implement the requirements of the OMB circulars, as the regulations become the primary policy documents of the funding agency.

Research Terms and Conditions

Developed under the auspices of the Office of Science and Technology Policy (www.ostp.gov), this standard set of core terms and conditions for research awards are meant to promote greater consistency across federal agencies in the administration of research awards, including grants and cooperative agreements. Such a consistency would be a welcome implementation for university research administrators, who often have to deal with applications from multiple agencies.

The core terms and conditions are a precursor to the issuance of government-wide terms and conditions that will apply to all federal grants and cooperative agreements, not just research and research-related ones. Research agencies and awarding offices participating in the Federal Demonstration Partnership (FDP) (www.thefdp.org) must use the core set of administrative requirements, to the maximum practicable extent, in research and research-related grant awards to organizations that are subject to the Uniform Guidance. The core set may be supplemented with agency-, program-, or award-specific administrative requirements, but supplemental requirements should be limited. Other agencies that do not participate in FDP are encouraged to use the core set of standard requirements.

At this writing, the Research Terms and Conditions under the Uniform Guidance are still in the review process and have not yet been finalized. When they are finalized, the Research Terms and Conditions can be found along with previous versions of this document on NSF’s website (https://www.nsf.gov/awards/managing/rtc.jsp).
¶1320.5 NIH Grants Policy Statement, and revisions
National Institutes of Health

The NIH Grants Policy Statement (NIHGPS) is the single document containing all policy requirements which act as terms and conditions on NIH awards. It is updated nearly annually. Most updates do not introduce new material for the first time, but instead incorporate new and modified requirements, clarifies policies, and implements changes which have been made to statutes and other federal regulations. Each policy statement update supersedes the prior version. Current and prior policy statements can be found on the NIH’s Office of Extramural Research website (https://grants.nih.gov/policy/nihgps/index.htm).

¶1320.6 NSF Proposal & Award Policies & Procedures Guide (PAPPG)
National Science Foundation

Like NIH, the National Science Foundation maintains a Proposal and Award Policies and Procedures Guide. This document is the overarching set of terms and conditions for proposal submission and award administration for the Foundation, and serves as the Foundation’s implementation of the Uniform Guidance. Part I of the PAPPG contains instructions for proposal preparation and submission, and Part II contains the instructions for administering awards. While the PAPPG is the main guidance document for NSF, it is important to remember the order of precedence of awards as many NSF solicitations and awards contain modifications to the Guide.

The current NSF PAPPG as well as past version can be found on the NSF Policy Office’s website (https://www.nsf.gov/bfa/dias/policy/).

¶1320.7 Frequently Asked Questions for the Uniform Guidance at 2 CFR 200
Council on Financial Assistance Reform (COFAR)

Since the issuance of the Uniform Guidance in December 2013, the Council on Financial Assistance Reform (COFAR) has issued a series of Frequently Asked Questions documents to address questions from federal sponsors, recipients of federal funds, and the audit community. The FAQ documents have been incorporated by reference to the Uniform Guidance via the Compliance Supplement. As of this writing, the most recent update to the FAQs was issued in September of 2015. A 2017 update is highly anticipated. The COFAR has an interactive website with additional information on the Uniform Guidance, and also contains a link to the most up to date version of the FAQs (https://cfo.gov/cofar/uniform-guidance/).
OMB New Metrics on Uniform Guidance
Office of Management and Budget

M-14-17, September 30, 2014
Subject: Metrics for Uniform Guidance (2 C.F.R. 200)

On December 26, 2013, OMB published final guidance in 2 C.F.R 200 titled Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards to improve the effectiveness and efficiency of Federal financial assistance. This guidance delivers on President Obama’s second term management agenda and his first term directives under Executive Order 13520, February 28, 2011 Presidential Memorandum, and the objectives laid out in OMB Memorandum M-13-17 to better target financial risks and better direct resources to achieve evidence-based outcomes.

Federal agencies are required to issue implementing regulations effective December 2014. In order to assure effective implementation, the Council on Financial Assistance Reform (COFAR) has established metrics to gauge how the guidance addresses its intended enhancements and to measure the performance of the Federal government’s work in the management of assistance in the form of Federal financial assistance. This memorandum applies to all CFO Act agencies that manage assistance programs, and sets forth requirements for the initial collection and use of administrative and audit metrics for the Uniform Guidance. By January 2017, OMB with the COFAR will evaluate the initial impact of the guidance based on these metrics and determine what additional steps may be necessary to further deliver administrative efficiency.

Summary of Required Agency Actions:

1. By January 15, 2015: All CFO Act agencies must report required baseline data for administrative metrics to OMB. OMB will provide a framework for metric collection via MAX. The Federal Audit Clearinghouse will provide baseline data for the audit metrics.

2. By January 15th (or following business day) of each subsequent year: Federal agencies and Federal Audit Clearinghouse must provide implementation metrics to OMB where required by this memo, which will be evaluated by the OMB and the COFAR.

3. By January 15, 2017, OMB and the COFAR will evaluate the utility of these metrics for evaluation of the guidance and as sentinels to identify issues with the guidance and opportunities to enhance effective implementation. As part of this evaluation, the COFAR will consider whether it is appropriate to set goals or target outcomes for these metrics.

Background:
The mandate for Federal grants management reform was established by Executive
Order 13520 in November 2009 and a Presidential Memorandum in February 2011.1 These directives instructed OMB to review government-wide policies governing grants to reduce administrative burden associated with management and oversight and focus our resources to better target risks of waste, fraud and abuse.

The COFAR, established October 2011, is an interagency group of Executive Branch officials for the coordination of Federal financial assistance. The Council, working with OMB, developed the Uniform Guidance over a two-year period, which included consideration of two rounds of extensive public comment. Final guidance was issued on December 26, 2013 and will be implemented by agency regulations to be effective December 26, 2014. Major elements of the reform include:

1. Integrating and streamlining eight overlapping OMB circulars into one set of guidance in Title 2 of the CFR;
2. Providing a set of uniform definitions for federal assistance;
3. Requiring pre-award consideration of merit and risk;
4. Strengthening internal controls while providing administrative flexibility;
5. Provisions for exceptions to support new innovative programs that improve cost effectiveness while achieving outcomes;
6. Streamlining and clarifying guidance on sub-recipient monitoring;
7. Providing consistency on negotiated indirect cost rates by creating a minimum rate for recipients and requiring agency-head approval for deviations from negotiated rates;
8. Simplifying reporting requirements for time and effort while strengthening the requirement for effective internal controls;
9. Targeting audit resources based on risk by raising the single audit threshold from $500K to $750K and focusing audits on material weaknesses; and
10. Strengthening audit follow-up by requiring greater accountability and monitoring results more closely.

In order to gauge success of guidance and identify opportunities to enhance its goals, OMB and the COFAR developed the metrics below. For all of these metrics, the baseline information will be taken from the last year prior to the new guidance taking effect.

In the first year, the COFAR anticipates that there will be some additional administrative burden resulting from the transition to the new guidance, which will decrease once the new policies are fully implemented. In order to minimize this burden, OMB intentionally developed metrics that may be predominantly mea-

sured based on information we already collect. This information is already available through the Office of Information and Regulatory Affairs (OIRA) and the Federal Audit Clearinghouse (FAC). For other information, OMB will work to collect it from the most centrally held place possible, and will work to develop a simplified collection through OMB MAX. Information to be collected from non-Federal stakeholders will be entirely optional. At this initial stage, metric collection is only to inform the COFAR about the current impact of implementation. Once the COFAR has reviewed the metrics for the first year, it will consider whether it is appropriate to establish goals or target outcomes for any given metric.

**Administrative Metrics:**

1. Inventory of OMB-approved Information Collections for Grants and Cooperative Agreements;
2. Number of OMB-approved Exceptions Focused on Program Performance Over Compliance;
3. Number of Fixed Amount Awards Issued;
4. Number/Impact of Agency Exceptions to the Provision of Federally Negotiated Rates; and
5. Number of Indirect Cost Rate Extensions Approved by Cognizant Agencies.

**Frequency:** Annual

**Baseline:** Guidance under previous circulars

**Data elements and sources of data:** HHS-led data standards repository, OMB records of exceptions, Federal agency records of fixed-amount awards collected via MAX, and indirect cost rate negotiation agencies.

**Burden of obtaining data:** Moderate — this will require some data to be collected from Federal agencies.

**Single Audit Metrics:**

1. Number of Modified Opinions for Higher Risk Major Programs;
2. Number of Audit Findings of Material Weaknesses in Internal Controls for Higher Risk Major Programs;
3. Number of Repeat Findings for Higher Risk Major Programs (Starting FY 2015);
4. Number of Major Programs selected for audit; and
5. Number of Audit Objectives in the Compliance Supplement.  

**Frequency:** Annual

**Baseline:** Audit Metrics FY 2014

**Data elements and sources of data:** FAC data, Single Audit reports, and the Compliance Supplement.

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2 This will be complemented by qualitative feedback from auditors on the extent to which the entire scope of work has been decreased.
**Burden of obtaining data:** Low to moderate as data routinely collected in the regular FAC or Compliance Supplement processes.

**Overall Impact on Burden and Waste, Fraud, and Abuse:**
1. Policy change that most reduced administrative burden, and dollar value of impact.
2. Policy change that most increased administrative burden, and dollar value of impact.
3. Policy change that most reduced risk of waste, fraud, and abuse, and dollar value of impact.
4. Policy change that most increased risk of waste, fraud, and abuse, and dollar value of impact.
5. Stakeholder satisfaction with the opportunity to engage with the COFAR or Federal agencies during the policy development process.
6. Stakeholder perception of whether the policy outcome appears responsive to (if not 100% aligned with) their input.
7. Opportunities for greater stakeholder engagement.

**Frequency:** Annual

**Baseline:** Guidance under previous circulars

**Data elements and sources of data:** Key stakeholder groups that voluntarily submit aggregated information on behalf of their constituencies.

**Burden of obtaining data:** Low to moderate as data collected voluntarily.

**Next Steps from Data Collection: Data Analysis, Recommendations & Future Policies**

Based on the evaluation of these metrics after the implementation of the uniform guidance, OMB and the COFAR will work with Federal agencies to gauge the success of the guidance and the performance of the Federal government’s work in the management of Federal financial assistance. If you have any questions regarding this memorandum, please contact Victoria Collin (vcollin@omb.eop.gov) (202-395-7791) or Gilbert Tran (htran@omb.eop.gov) (202-395-3052).
1320.9 Uniform Guidance Implementation and Readiness Guide

Council on Governmental Relations (COGR)

The Implementation and Readiness Guide for the OMB Uniform Guidance (Readiness Guide), developed by COGR, is a resource to help your institution prepare for and implement the OMB Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards; Final Rule – 2 CFR Chapter I, Chapter II, Part 200, et al. (i.e., the Uniform Guidance, or the UG). The Readiness Guide incorporates guidance and clarifications based on November 25th, August 29th, and February 12th FAQs released by the Council on Financial Assistance Reform (COFAR) and available on their website.

As of the writing of this document, we are uncertain on the status of possible technical corrections and other updates to the Final Version of the Uniform Guidance, including uncertainty as to how each federal agency will implement the Uniform Guidance. Consequently, we have developed this as a “Living Document” and have notated this document as the DECEMBER 12, 2014 VERSION of the Readiness Guide. We will update, accordingly, after the Uniform Guidance is released.

The Uniform Guidance is applicable to Institutions of Higher Education (IHEs) and Nonprofit Research Institutions, as well as other non-federal entities including States, Local and Tribal governments and nonprofit organizations. As specified in the preamble to the Uniform Guidance, the cost principles for Hospitals are not changed but may be addressed in the future. The Readiness Guide is targeted to IHEs and Nonprofit Research Institutions that comprise the COGR Membership.

The Readiness Guide is organized into the sections described below. Each section includes: Item (with reference to the applicable section of the Uniform Guidance in parentheses) and Summary and Points to Consider (quick summary and suggested institutional considerations specific to the applicable section of the Uniform Guidance).

A. GENERAL
B. FUNDING AGENCY AND AWARD REQUIREMENTS
C. AWARD ADMINISTRATION
D. SUBAWARDS AND SUBRECIPIENT MONITORING
E. PROPOSING AND CHARGING COST ITEMS (includes initial comments on “effort reporting”)
F. F&A RATE PROPOSALS

Contact COGR staff if you have questions and we will keep the COGR membership updated on all important developments.

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### A. General

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<tr>
<td>1.</td>
<td>Effective Dates (200.110)</td>
<td>200.110(a) and (b) specify that Federal agencies must implement the policies and procedures applicable to Federal awards by promulgating regulations to be effective by December 26, 2014. Subpart F-Audit Requirements will apply to audits of fiscal year beginning on or after December 26, 2014. COFAR FAQs .110-7 and .110-12 specify that funding increments on existing awards, issued post 12/26/14, may be subject to the UG at the agency’s discretion and if the incremental funding is subject to the UG, it will be issued with modified terms and conditions. COFAR FAQ .110-2 states that F&amp;A rate proposals based on FY14 can be developed using provisions in the UG. COFAR FAQs .110-3 and .110-5 provide guidance to IHE’s for submitting revised DS-2s. COFAR FAQ .110-6 creates a grace period for the implementation of the Procurement Standards. For FY16, institutions have the option to use Circular A-110 or the UG. Beginning with FY17, institutions must comply with the UG. <strong>POINTS TO CONSIDER:</strong> 1. Track, if necessary, awards issued under the Circulars and awards issued under the UG. 2. Update institutional policy to specify which federal procurement policies will be followed. 3. Work closely with your A-133/Single Audit team to understand the approach to the FY2015 single audit. Technically, Subpart F will be effective for the institution’s first FY beginning on or after 12/26/14 (e.g., fiscal year beginning on July 1, 2015, or FY2016). However, the 2015 Compliance Supplement (normally released in March) will include guidance to auditors on how to review and audit new awards to which the UG is applicable. 4. Pay close attention to new developments related to updating the DS-2, as well as cognizant agency positions on F&amp;A rate proposal submissions. Some of these issues are unsettled and more clarification should be provided, shortly.</td>
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<td>2.</td>
<td>Conflict of interest (200.112)</td>
<td>COFAR FAQ .112-1 specifies this section of the UG does not refer to scientific conflicts of interest related to research. Instead, it refers to conflicts related to how decisions are made for selecting subrecipients or procurements as described in 200.318. <strong>POINTS TO CONSIDER:</strong> 1. Review processes for identifying and managing conflicts of interest in the procurement process. 2. The standard convention is that that subrecipient selection is part of the proposal evaluation process and not part of a procurement action. The FAQ confuses this matter. Institutions should clearly articulate their policies and distinguish between procurement actions and subrecipient selection.</td>
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<td>3.</td>
<td>Mandatory disclosures (200.113)</td>
<td>This section is new to the Uniform Guidance. <strong>POINTS TO CONSIDER:</strong> 1. COGCR’s view is that this section does not change the current obligation and responsibility to disclose and report violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. The FAR has provisions (Subpart 3.10 Contractor Code of Business Ethics and Conduct; see also DFARS Subpart 209.5; EDAR 3409.5; etc.) and institutions that receive Federal contracts already should have a mechanism for meeting this FAR requirement. 2. Review current policies and practices (e.g., posting of hotline numbers, reportable violations, materiality levels, timeliness for reporting, etc.) to ensure that they provide for compliance with current obligations to report.</td>
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### Item Summary and Points to Consider

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<td>4.</td>
<td>Internal controls (200.303)</td>
<td>There are five “musts” and one “should” for non-Federal entities articulated in this section:</td>
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<td>must establish and maintain effective internal control over Federal awards that provide</td>
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<td>reasonable assurance of managing in compliance with Federal rules and regulations; should be</td>
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|    |                                                           | in compliance with guidance in “Standards for Internal Control in the Federal Government” (i.e., the Green Book) issued by the Comptroller General of U.S. and the “Internal Control Integrated Framework”, issued by the COSO; must comply with Federal statutes, regulations and terms and conditions of award; must evaluate and monitor compliance; must take action on any instances of non-compliance; and, must take reasonable measures to safeguard personally identifiable information any other designated sensitive information. FAQ .303-2 clarifies the use of “must” and “should” in the UG. FAQ .303-3 specifies that it is not a requirement to strictly follow the Green Book and COSO. **POINTS TO CONSIDER:**  
  1. COGR’s view is that this section does not change the current obligation and responsibility for an institution to have a robust system of internal controls.  
  2. The Green Book and COSO can be utilized, but are not required, to assess compliance. COFAR FAQs .303-2 and .303-3 support this.  
  3. Review your current internal control infrastructure, with a special focus on areas that changed due to the Uniform Guidance. Ensure controls are documented adequately.  |
| 5. | Research Terms and Conditions (200.210)                   | 200.210(b) states that Federal awarding agencies must incorporate general terms and conditions either in the Federal award or by reference. However, long-practiced Research Terms and Conditions are not addressed in this section. **POINTS TO CONSIDER:**  
  1. Research Terms and Conditions, previously applicable by reference to OMB Circular A-110 (2CFR Part 215), will not be applicable to research awards issued after 12/26/14.  
  2. Until new Research Terms and conditions are available, Federal awarding agencies may incorporate general terms and conditions either in the Federal award or by reference. These awards issued may include varying prior approval requirements, either in the award agreement or in the agency’s implementation of the UG.  
  3. Work closely with Federal officials to confirm the applicable terms and conditions for new awards.  
  4. Updated Research Terms and Conditions applicable to awards subject to the UG are in development and may be available soon.  
  5. **CURRENTLY UNDER REVIEW:** Upon release of updated Research Terms and Conditions, OMB and Federal agencies are considering a policy that would allow the updated Research Terms and Conditions to be applied retroactively to research awards issued after 12/26/14, if updated Research Terms and Conditions were not yet available. Pay close attention to new developments related to the release of updated Research Terms and Conditions. |
## B. Funding Agency and Award Requirements

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<td>1.</td>
<td>Funding opportunities available for at least 60 calendar days</td>
<td>200.203(b) states that Federal awarding agency must generally make all funding opportunities available for at least 60 calendar days. The awarding agency may make a determination to have a less than 60 calendar day availability period but no funding opportunity should be available for less than 30 calendar days unless exigent circumstances. <strong>POINTS TO CONSIDER:</strong> 1. 60 calendar days sets a clear standard. However, agencies still can make determinations that less than 30 days is appropriate. 2. Contact Federal officials when there are deviations and ask for documentation and justification. 3. Notify COGR staff to document deviations.</td>
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<td>2.</td>
<td>Voluntary cost sharing cannot be required</td>
<td>200.204 states that the Federal awarding agency must design and execute a merit review process for applications, which must be described or incorporated by reference in the applicable funding opportunity and Appendix I, C.2., states that announcements must state whether there is required cost sharing, matching, or cost participation. If cost sharing will not be considered, the announcement should say so. 200.306 states that Under Federal research proposals, voluntary committed cost sharing is not expected. It cannot be used as a factor during the merit review of applications or proposals, but may be considered if it is both in accordance with Federal awarding agency regulations and specified in a notice of funding opportunity. COFAR FAQ 458-2 confirms applicability of the OMB clarification of uncommitted cost sharing in OMB M-01-06 dated January 5, 2001. <strong>POINTS TO CONSIDER:</strong> 1. Contact Federal officials when there are deviations and ask for documentation and justification. 2. Notify COGR staff to document deviations.</td>
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<td>3.</td>
<td>Agency financial risk assessment of applicants</td>
<td>200.205(b) states that the Federal awarding agency must have in place a framework for evaluating the risks posed by applicants before they receive Federal awards. COFAR FAQ .205-1 specifies that this section of the UG applies to Federal awarding agency assessment of risk, not auditor assessment. <strong>POINTS TO CONSIDER:</strong> 1. Be aware that agencies likely will review audit results and could be looking for other ways to evaluate risk. 2. Notify COGR staff if it appears agencies are making determinations based on other criteria, particularly if the agency determines anything other than low-risk AND what the agency does to mitigate the perceived risk (e.g. more restrictive terms and conditions).</td>
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<td>4.</td>
<td>Agencies can use only OMB approved information collections</td>
<td>200.206(a) states that the Federal awarding agency may only use application information collections approved by OMB under the Paperwork Reduction Act of 1995 and OMB’s implementing regulations in 5 CFR Part 1320, Controlling Paperwork Burdens on the Public. <strong>POINTS TO CONSIDER:</strong> 1. Contact Federal officials when there are deviations and ask for documentation and justification. 2. Notify COGR staff to document deviations.</td>
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<td>5.</td>
<td>Agencies (and Primes) are required to use the negotiated F&amp;A rate</td>
<td>200.414(c) states that when there are deviations, Federal agency heads are required to notify OMB and to make publicly available the decision making criteria used to justify the deviations.</td>
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<td>(200.414)</td>
<td>POINTS TO CONSIDER:</td>
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<td>1. Contact Federal officials when there are deviations and ask for documentation and justification.</td>
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<td>2. Notify COGR staff to document deviations.</td>
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<td>3. Consider how the institution will address F&amp;A restrictions imposed on Federal flow through from Prime recipients, such as flow through funding from State and local government.</td>
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C. Award Administration

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<th>Summary and Points to Consider</th>
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<td>1.</td>
<td>Program Income (200.307)</td>
<td>200.307(e) states that the “Addition” method is the default for IHEs and nonprofit research institutions.</td>
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<td>COFAR FAQ .307-1 specifies that program income from license fees and royalties should be excluded from the definition of program income and that U.S. law and statute take precedent.</td>
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<td>POINTS TO CONSIDER:</td>
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<td>1. a) The FAQ clarifies the treatment of program income from license fees and royalties to make it consistent with past requirements in A-110 so no action is necessary.</td>
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<td>2.</td>
<td>Faculty Disengagement (200.308)</td>
<td>200.308(c) states that prior approval is required when there is “disengagement” (previously, “absence” per Circular A-110) from the project for more than three months, or a 25 percent reduction in time devoted to the project, by the approved project director or principal investigator.</td>
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<td>POINTS TO CONSIDER:</td>
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<td>1. Be aware of the new terminology (“disengagement”) and update policies and practices, accordingly.</td>
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<td>2. Consider using more positive language such as “Principal Investigators can be away from campus and still be engaged in the sponsored project.”</td>
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<td>3.</td>
<td>Equipment and property systems (200.313)</td>
<td>COFAR FAQ .313-1 clarifies that “conditional title” is not a new term and always has been in effect. Therefore, title continues to vest upon acquisition and is only contingent on meeting the requirements for use. COFAR FAQ .313-2 confirms that non-Federal entities are not expected to change their inventory systems or data elements in those systems if the systems are in compliance with the current requirements in Circular A-110.</td>
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<td>POINTS TO CONSIDER:</td>
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<td>1. Review existing equipment and property systems and confirm current compliance with A-110.</td>
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<td>2. Update systems or data elements, if necessary, to ensure compliance.</td>
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<td>4.</td>
<td>Accounting for residual inventory &gt; $5,000 (200.314)</td>
<td>200.314(a) states that if there is a residual inventory of unused supplies exceeding $5,000 in total aggregate value upon completion of an award and the supplies are not needed for any other Federal award, the non-Federal entity must retain the supplies for use on other activities or sell them, but must, in either case, compensate the Federal government for its share. This is not a new requirement and existed under Circular A-110, C.35(a). <strong>POINTS TO CONSIDER:</strong> 1. Review current policies and practices, especially regarding purchases made during the last 60 – 90 days of the award. 2. Pay special attention to Computing Devices (also see section 200.453). One interpretation may be that once a computing device is used on a project, it does not meet the definition of “residual inventory” and therefore is not subject to the post-award accounting requirement. However, proper cost allocation principles still apply, and allocation may be questioned for computing devices purchased towards the end of project.</td>
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<td>5.</td>
<td>Procurement standards (200.317 thru 200.326)</td>
<td>COFAR FAQ.110-6 creates a grace period for the implementation of the Procurement Standards. For an institution’s FY16, it will have the option to use Circular A-110 or the UG. An institution must document whether it is in compliance with A-110 or the UG, and must meet the documented standard. Beginning with an institution’s FY17, it must comply with the Procurement Standards in the UG. <strong>POINTS TO CONSIDER:</strong> 1. Review new standards and begin consideration of revisions to policies and practices. 2. Update institutional policy to specify which federal procurement policies will be followed during the grace period, and be prepared to share the institutional policy with auditors. 3. Pay close attention to new developments and work being conducted by COGR and the FDP. COGR expects to provide additional guidance in 2015.</td>
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<td>6.</td>
<td>Project Closeout and the 90-day requirement (200.343)</td>
<td>The UG requires all financial, performance and other reports be submitted using the longstanding 90-day after the end date of the project, unless an extension is approved by the awarding agency. <strong>POINTS TO CONSIDER:</strong> 1. Some federal agencies have recently implemented technology to tightly monitor the 90 closeout rule. IHEs should review procedures for the timing of final billing and submission of final reports. 2. If necessary, consider different guidance for Federal versus non-Federal awards. 3. Consider cutoff dates for subrecipients and language in subrecipient agreement (FDP templates will be updated with appropriate language). 4. Review the need to update or change procedures for the posting of charges after the closeout period. 5. COGR is cautiously optimistic that the updated Research Terms and Conditions (as indicated previously, release date uncertain) will extend the deadline for certain types of reports (e.g., financial) to 120 days. The treatment of other types of reports is uncertain. 6. If/when the 120 days is implemented, it is possible there will be differences across Federal agencies (e.g., some may maintain 90 days). Close attention should be paid to these variances. 7. Attention also should be paid to any agency guidance related to old versus new awards to confirm that both should be treated the same way.</td>
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### Required certifications (200.415)

200.415(a) states that to assure that expenditures are proper and in accordance with the terms and conditions of the award, the annual and final fiscal reports or vouchers requesting payment under the agreements must include a certification, signed by an official who is authorized to legally bind the non-Federal entity. The certification language must include language as specified in this section (see 200.415(a) for exact language and context of the requirement).

**POINTS TO CONSIDER:**
1. Review and adjust your delegation policies to ensure those responsible for signing financial reports are compliant with the new certification requirements.
2. Consider simpler certifications, if any, on non-Federal awards.

### D. Subawards and Subrecipient Monitoring

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<td>1</td>
<td>Payments to subrecipients (200.305)</td>
<td>200.305(b)(3) states that when the cost reimbursement method of payment is used, payments to subrecipients must be made within 30 calendar days after the receipt of the billing, unless the request is improper.</td>
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<td><strong>POINTS TO CONSIDER:</strong></td>
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<td>1. Consider review of current procedures for payments, including documenting receipt of invoices and whether payment is occurring timely.</td>
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<td>2. Consider whether updated procedures are necessary for proper handling of improper invoices (see 200.305(b)(6)).</td>
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<td>2</td>
<td>Requirements for paying subrecipient F&amp;A</td>
<td>Except if the awarding federal program is subject to a reduced F&amp;A rate (conforming to 200.414), pass-through entities must pay the subrecipient’s federally negotiated rate or, if they have never had a rate, either pay a de minimus F&amp;A rate of 10% MTDC or negotiate a rate with the subrecipient. Subrecipients may decline F&amp;A reimbursement, but pass-through entities may not coerce them to accept a rate lower than that to which they are entitled.</td>
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<td>(200.331, 200.414)</td>
<td><strong>POINTS TO CONSIDER:</strong></td>
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<td>1. Consider developing a policy to document the rate agreed at the time of a proposal and the basis for the rate (federally-negotiated, de minimus, negotiated with pass-through entity, other). If the rate used is lower than the rate to which the subrecipient was entitled, consider documenting that such a rate was agreed to voluntarily by the subrecipient.</td>
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<td>2. Consider an institutional approach for managing F&amp;A shortfalls for awards proposed/costed under the old rules, but subsequently awarded under the UG.</td>
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<td>3. Consider identifying and publishing the circumstances under which your institution may be willing to negotiate an F&amp;A rate with a proposed subrecipient who does not have a federally negotiated rate.</td>
</tr>
<tr>
<td>3</td>
<td>Mandatory new data elements (200.331)</td>
<td>200.331(a) includes a list of the mandatory new data elements.</td>
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<td><strong>POINTS TO CONSIDER:</strong></td>
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<tr>
<td></td>
<td></td>
<td>1. a) Revise local subaward templates (or use FDP templates) to ensure that the several new data elements required under this section are included in each subaward.</td>
</tr>
<tr>
<td>4</td>
<td>Subaward Financial and Progress Reports</td>
<td>200.331(d)(1) states that pass-through entities must specify any required financial and programmatic reports in their subawards, and are responsible for reviewing such reports.</td>
</tr>
<tr>
<td></td>
<td>(200.331, 200.328)</td>
<td><strong>POINTS TO CONSIDER:</strong></td>
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<tr>
<td></td>
<td></td>
<td>1. Review subaward issuance procedures to ensure desired reports are included.</td>
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<td>2. Review subrecipient monitoring procedures to ensure receipt and review of subrecipient programmatic reports and financial reports/invoices. Ensure mechanism for documenting reviews for audit purposes.</td>
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### Item Summary and Points to Consider

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| 5. | Risk Assessment (200.331) | **200.331(e)** states that pass-through entities are obligated to evaluate a subrecipient’s risk and use that assessment to determine appropriate subrecipient monitoring activities. The UG suggests but does not require that certain factors be included in the risk assessment.  
 **POINTS TO CONSIDER:**  
 1. Decide if your risk assessment process is adequate and if the outcomes are used to drive your subrecipient monitoring.  
 2. Determine if you will adopt the recommended risk assessment factors. |
| 6. | Subrecipient Monitoring (200.331) | **200.331(d)** specifies both mandatory and as-needed subrecipient monitoring obligations. Audit reports are now expected to be obtained through the Federal Audit Clearinghouse (rather than from each subrecipient, though audit reports are not expected to be available until later in 2015.).  
 **POINTS TO CONSIDER:**  
 1. Determine whether your subrecipient monitoring process includes all of the specified mandatory monitoring obligations and whether you wish to include the optional monitoring recommendations.  
 2. Consider the impact of subrecipients previously subject to A-133 audits but now exempt because of the increase in the audit threshold from $500K to $750K on your risk assessment and monitoring.  
 3. Ensure that audit reports are sought through the Federal Audit Clearinghouse (FAC) rather than contacting individual subrecipients (once these become available in the FAC).  
 4. Review monitoring process to ensure that your management decisions are documented |
### Item Summary and Points to Consider

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<tr>
<td>7.</td>
<td>Issuing fixed amount subawards (200.45, 200.201, 200.332)</td>
<td>200.332 requires a pass-through entity to obtain Federal agency prior approval to enter into fixed price subawards; fixed price subays may not be used if cost-sharing is involved; the total dollar amount of each fixed price subaward may not exceed $150K (the simplified acquisition threshold); and requires a new certification by the sub-awardee at the end of the project that the activity or level of effort was completed or else the cost must be adjusted. COFAR FAQ .332-1 states it is acceptable to have more than one fixed price subaward to the same subrecipient if its total cost under the project exceeds $150K, or the agency can be consulted for guidance.</td>
</tr>
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</table>

**POINTS TO CONSIDER:**

1. Determine the volume and size of your fixed price subaward portfolio to ascertain the impact of these new requirements. Consider whether you need to identify fixed price subawards in your tracking system.
2. Review procedures to ensure prior approval is obtained from the agency before executing a fixed price subaward.
3. For fixed price subawards exceeding $150K, develop a process to create separate statements of work and deliverables that stay within the $150K threshold, or decide when you will consult the agency for guidance.
4. Review your closeout process to ensure you obtain mandatory completion certification. Determine procedure for deciding when cost adjustments are needed and the basis that will be used for adjusting cost (see FAQs .201-3 and 200.308).

### E. Proposing and Charging Cost Items

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<th>Summary and Points to Consider</th>
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</table>
| 1. | Direct charging of administrative and clerical salaries (200.413) | 200.413(c) states that salaries of administrative and clerical staff should normally be treated as indirect (F&A) costs. Direct charging of these costs may be appropriate only if all of the following conditions are met:

1. Administrative or clerical services are integral to a project or activity;
2. Individuals involved can be specifically identified with the project or activity;
3. Such costs are explicitly included in the budget or have the prior written approval of the federal awarding agency; and
4. The costs are not also recovered as indirect costs. |

**POINTS TO CONSIDER:**

1. Update and/or develop a policy for charging administrative and clerical salaries that addresses the UG criteria.
2. Such a policy might define integral, provide examples and FAQs, and specify when a budget justification is required.
3. For non-federal projects consider requiring only that the cost be allocable to the project.
4. Pay special attention to Modular budgets and any forthcoming guidance specific to the UG.
5. Pay special attention to prior approvals expectation as specific guidance has yet to be confirmed.
6. Consider a review of systems and processes to ensure these costs are not included in F&A rate cost pools.
7. Pay close attention to new developments related to updating the DS-2. This issue is unsettled and more clarification should be provided shortly.
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<th>Item</th>
<th>Summary and Points to Consider</th>
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</table>
| 2. | Compensation and documentation (formerly effort reporting) (200.430) | Review this section carefully and determine the system of records necessary to address the requirements, if not already doing so.  
200.430(i), Standards for Documentation, changes the emphasis of documenting salary charges to federal awards from the three examples in A-21 (which have been eliminated in the Uniform Guidance) to a system that is premised on strong internal controls. There is no reference to "certification", which suggests that a traditional effort reporting system may not be required and that the institution’s official payroll system may be the basis for confirming payroll charges to federal awards. Issues, such as the characteristics of an auditable “system of internal control which provides reasonable assurance”, require further analysis. COGR will work towards developing additional analysis to address effective institutional practices and methodologies that will be in compliance with the new requirements for documenting salary charges to federal awards. Some analysis may utilize, if appropriate, results of audits based on the FDP demonstration projects on payroll confirmation.  
200.430(h) is directed to IHE’s. 200.430(h)(2) defines Institutional Base Salary, IBS, as “the annual compensation paid by an IHE for an individual’s appointment, whether that individual’s time is spent on research, instruction, administration or other activities.” COGR understands this language to include the total of the individual’s multiple appointment(s) that comprise IBS within the institution. Again, COGR will work towards developing additional analysis on this section.  
FAQ .430-1 addresses the role of the DS-2 in the case of changes to time and effort systems. However, additional clarification may be necessary and we recommend paying close attention to new developments related to updating the DS-2.  
**POINTS TO CONSIDER:**  
1. Review new standards and begin consideration of revisions to policies and practices.  
2. If changes are being considered (e.g., frequency, certification language, etc.), pay close attention to new developments related to updating the DS-2. This issue is unsettled and more clarification should be provided shortly.  
3. Pay close attention to new developments and work being conducted by COGR, the FDP, and other higher education leaders. COGR expects to provide additional guidance in 2015. |
| 3. | Executive Compensation limitation (200.430)                         | 200.430(d)(2) states that the allowable compensation for certain employees is subject to a ceiling in accordance with statute. For the amount of the ceiling for cost-reimbursement contracts, the covered compensation subject to the ceiling, the covered employees, and other relevant provisions, see 10 U.S.C. 2324(e)(1)(P), and 41 U.S.C. 1127 and 4304(a)(16). According to Public Law 113- 67 (effective 12/26/13), the compensation limit (i.e., salary and all benefits) is set at ~$487,000 for covered contracts awarded on or after 6/24/14. FAR 31.2 (cost principles for contracts with commercial organizations) incorporates the applicable USC sections by reference and limits allowable compensation on covered contracts.  
**POINTS TO CONSIDER:**  
1. The FAR currently defers to Circulars A-21 and A-122 for covered contracts with IHEs and nonprofit research institutions.  
2. Going forward, the FAR will defer to the Uniform Guidance and, consequently, IHEs and nonprofit research institutions may be required to comply with the limit. |
| 4. | Terminal Leave and other benefits (200.431)                          | COFAR FAQ 200.431-1 states that OMB will issue a technical correction to delete the requirement that indirect costs be used to charge payments of unused leave, workers compensation, unemployment compensation, severance pay and similar employee benefits. Consequently, direct charging using the cash basis of accounting remains an allowable methodology.  
**POINTS TO CONSIDER:**  
1. If continuing to direct charge terminal leave costs under the cash basis, review your process for allocating these costs, and the internal control environment to assure proper allocation of the costs. |
### Item Summary and Points to Consider

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<tbody>
<tr>
<td>5</td>
<td>Computing devices</td>
<td>200.453 states that materials and supplies used for the performance of a Federal award may be charged as direct costs. In the specific case of computing devices, charging as direct costs is allowable for devices that are essential and allocable, but not solely dedicated, to the performance of a Federal award.</td>
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<tr>
<td></td>
<td>(200.453)</td>
<td><strong>POINTS TO CONSIDER:</strong></td>
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<tr>
<td></td>
<td></td>
<td>1. Consider reviewing current institutional policy to ensure that computing devices that are charged as direct costs are essential and allowable, even if not solely dedicated to the award.</td>
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<td>2. Charging 100% to a Federal award appears to be allowable, though this is a topic still under discussion as to the best/effective practices for implementing.</td>
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<td>3. When computing devices are used for the conduct of research and exceed the institution’s capitalization threshold, such devices should be proposed and charged as scientific equipment and not as general purpose equipment.</td>
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<td>4. Refer to agency implementation guidelines for specifics regarding proposing and charging computing devices, and scientific and general purpose equipment.</td>
</tr>
<tr>
<td>6</td>
<td>Participant Support Costs and MTDC (200.456)</td>
<td>200.456 states that participant support costs, as defined in Subpart A. Definitions, 200.75, are allowable with the prior approval of the Federal awarding agency but are excluded from the MTDC base (see Subpart A. Definitions 200.68).</td>
</tr>
<tr>
<td>7</td>
<td>Publication costs</td>
<td>200.461 states that page charges for professional journals are allowable when they report work on an award and the journal levies charges impartially on all items published by the journal (whether or not under a federal award). The costs of publication or sharing of research results may be charged even if incurred after the end date of the award but before award closeout.</td>
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<td>(200.461)</td>
<td><strong>POINTS TO CONSIDER:</strong></td>
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<td>1. Review current processes to determine how you will ensure that the journal applies its charges independent of fund source</td>
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<td>2. Review internal procedures to determine if you will allow posting of publication charges after the end date of the award, but before closeout; and if so, during what period of time this will be permitted (e.g., without delaying closeout).</td>
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<td>Summary and Points to Consider</td>
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| 8. | Dependent travel and commercial airfare (200.474)                    | 200.474(c) states that temporary dependent care costs (as dependent is defined in 26 U.S.C. 152), above and beyond regular dependent care, that directly results from travel to conferences is allowable provided that:  
1. The costs are a direct result of the individual’s travel for the Federal award;  
2. The costs are consistent with the non-Federal entity’s documented travel policy for all entity travel;  
3. Are only temporary during the travel period.  
Travel costs for dependents are unallowable, except for travel of duration of six months or more with prior approval of the Federal awarding agency.  
200.474(d)(1) refers to Commercial air travel and uses the following language: the “least expensive unrestricted accommodations class” offer by commercial airlines.  
A-21 J.53 c(1) used the language “customary standard commercial airfare (coach or equivalent), ... or the lowest commercial discount airfare”.

**POINTS TO CONSIDER:**  
1. Consider performing a cost analysis for item (ii) above to estimate the cost to the institution of providing temporary dependent care costs institution-wide.  
2. IHEs may consider adding an extraordinary dependent care program as a component of their Fringe Benefit rate, recognizing that it would take time to define and estimate the costs of the program, and to propose and negotiate the costs added to the Fringe Benefit rate.  
3. Consider whether an IHE should change policies from the lowest available fare (LAF) to “least expensive unrestricted class”. While this may represent a more expensive airfare, the Uniform Guidance allows this methodology.

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F. F&A Rate Proposals

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<th>Summary and Points to Consider</th>
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| 1. | Treatment of cost sharing and losses in the research base (200.306 & 200.451) | 200.306(a) states that only mandatory cost sharing or cost sharing specifically committed in the project budget must be included in the organized research base. FAQ .458-2 confirms the continued applicability of the 2001 OMB memorandum that addressed voluntary uncommitted cost share, M-01-06. FAQ .201-2 (addressing Fixed Amount Awards) also provides a clarification that salary costs above a Federal awarding agency’s cap are not mandatory cost-share or match but, instead, are the result of limitations on the amount of salary costs that may be charged.

200.451 specifies that losses on awards are not allowable indirect (F&A) costs and are required to be included in the appropriate indirect cost rate base to receive an allocation of indirect costs.  

**POINTS TO CONSIDER:**  
1. Develop institutional procedures for treatment of salary costs above a Federal awarding agency’s cap within the F&A proposal. Since there is currently no specific requirement within the UG to include these costs in the organized research base, look for potential opportunities for fair treatment of salary costs above the cap.  
2. Consider whether your institution will allow, not allow, or discourage voluntary committed cost sharing since agencies are not to consider it in merit reviews of applications or proposals, unless it is both in accordance with Federal awarding agency regulations and specified in a notice of funding opportunity.  
3. As OMB M-01-06 remains applicable, a minimum level of committed effort still needs to be captured for faculty (or senior researchers) on most Federally-funded research programs, either paid or unpaid by the Federal Government.
# Item Summary and Points to Consider

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<tr>
<td>2.</td>
<td>Request for a 4-year rate extension (200.414)</td>
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200.414(g) allows for a one-time extension of the current negotiated indirect cost rate for a period of up to four years. This refers to an extension that changes your base year, not an extension of the due date to submit your proposal for the same base year. FAQs .414-2 and .414-3 confirm that multiple four-year rate extensions can be requested if a negotiation is completed between each rate extension request. FAQ .414-2 also specifies that documentation requests to support a four-year extension should be kept to a minimum.

**POINTS TO CONSIDER:**

1. Contact your cognizant agency as soon as possible if you are considering requesting such an extension.

2. CAS and ONR, in an October 22nd meeting with COGR, were consistent in stating that documentation requirements for requesting an extension will be kept to a minimum. Also, once the extension period is complete (even if only for one year), a new proposal will be required. COGR's understanding of each agency's current position on data requirements is:

   CAS: Additional data requirements will include the last audited financial statement, last A-133 audit, summary schedules of Research base activity and space activity since your last proposal, along with a forecast for both the number of years for which the extension is being requested;

   ONR: Documentation requirements will depend on the number of years requested. If requesting 1-2 years, start with a phone call to ONR. They will review the previous proposal and other information and determine the documentation that will be necessary. If requesting 3-4 years, the documentation required would be more comprehensive, including the last audited financial statement, last A-133 audit, space and base activity since your last proposal, and space and base forecasts for the number of years for which the extension is being requested.

3. Submitting a revised DS-2 (200.419) |

200.419(b) maintains the requirement that an IHE that receives aggregate Federal awards totaling $50 million during its most recently completed fiscal year must disclose their cost accounting practices by filing a Disclosure Statement (DS-2). FAQs .110-3 and .110-5, released in November 2014, attempt to clarify the process for completing and submitting a DS-2. However, additional clarification is necessary and should be forthcoming.

**POINTS TO CONSIDER:**

1. Per FAQ .110-3, IHE's with CAS covered-contracts meeting the dollar threshold should submit their revised DS-2 as soon as possible after 12/26/2014, but in any event no later than prior to the award of a CAS-covered contract or subcontract.

2. Per FAQ .110-3, IHEs that do not meet the CAS covered contract threshold should submit their DS-2 with the next submission of the IHE's indirect cost rate proposal, unless requested earlier by the cognizant agency.

3. Per FAQ .110-3, IHE's making voluntary changes in cost accounting practices other than those required in the Uniform Guidance or submitting indirect cost rate proposals that are currently due should submit their DS-2 (or revised pages of the DS-2 for changes that are not extensive) 6 months before the effective date of proposed changes.

4. Per FAQ .110-5, Non-Federal entities will not be penalized for discrepancies between their approved DS-2 and actual charging practices in accordance with the new uniform guidance, provided that an updated DS-2 (consistent with actual charging practices) has been revised and submitted in accordance with FAQ .110-3.

5. Pay close attention to new developments related to revising and submitting the DS-2. Simplification and clarification of the process will be provided by OMB shortly.
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<tr>
<td>4.</td>
<td>Allowable depreciation (200.436)</td>
<td>200.436(a) includes software as an asset that can be capitalized, in accordance with GAAP. FAQ .436-1 clarifies that the depreciation associated with the institutional contribution toward the cost of buildings and equipment is allowable, unless law or agreement prohibits recovery. This resolves the confusion created by 200.436(c)(3), which states that if an institution receives federal assistance for a portion of the costs to construct buildings or equipment, even if the institutional share is not by law or agreement required as cost sharing, the institution’s share is excluded from cost prior to calculating depreciation. 200.436(c)(4) states that the acquisition cost will exclude only assets acquired solely for the performance of a non-federal award. <strong>POINTS TO CONSIDER:</strong> 1. Review/update institutional equipment policy and disclosure statement regarding software. 2. Include equipment depreciation on non-federal awards that are not acquired solely for the performance of the non-federal award in your next F&amp;A proposal. This is a change from the previous cognizant agency position where remaining depreciation from any non-federal award could be recovered only after the non-federal award ended. 3. Notify COGR if depreciation on the institutional contribution associated with buildings and equipment is disallowed.</td>
</tr>
<tr>
<td>5.</td>
<td>1.3% Utility Cost Adjustment (Appendix III)</td>
<td>Appendix III, B.4.c, states that a utility cost adjustment of up to 1.3 percentage points may be included in the negotiated indirect cost rate for organized research. FAQ .110-2 states that F&amp;A rate proposals based on FY14 and after can be developed using provisions in the UG. FAQ Appendix III-1 specifies that IHEs and cognizant agencies should address issues related to the 1.3% UCA in a collaborative manner. <strong>POINTS TO CONSIDER:</strong> 1. COGR’s understanding of CAS’s current position is that CAS may (or may not) not accept the UCA factor for IHEs that have never had the UCA, until base year FY2016. For institutions with FY2014 or FY2015 base years: • - IHEs already receiving the 1.3% should add the 1.3% as they have in the past without additional justification. • - IHEs that have never received the 1.3% should add in a factor with a justification, but at this point there is no indication that CAS will/will not accept the adjustment. • - Proposals based on FY2016 and beyond should include the UCA factor with the appropriate justification. 2. COGR’s understanding of ONR’s current position is that institutions will be allowed to include the UCA, but may need to calculate and justify it beginning with FY2014, regardless of whether or not the institution previously received the UCA. 3. Pay close attention to new developments related to application of the 1.3% UCA. This issue is unsettled and more clarification should be provided shortly.</td>
</tr>
<tr>
<td>6.</td>
<td>Treatment of DA expenses and the DCE (Appendix III)</td>
<td>Appendix III, B.6.a eliminates the language from A-21 F.6.b(2) which stated that administrative and clerical salaries should normally be treated as F&amp;A costs unless they could be specifically identified to a “major project”. <strong>POINTS TO CONSIDER:</strong> 1. For those institutions using a Direct Charge Equivalent (DCE) to build their DA cost pool, this change in costing could affect the DCE ratio. It is assumed that the change in language regarding administrative and clerical salaries will allow for more direct charging of these costs, which could raise DCE ratios and lower DA costs. 2. The DCE is predicated on the treatment of job titles/ codes/ descriptions, and consequently, may require closer review when developing the DA cost pools. 3. Institutions not significantly over the administrative cap should analyze the effect this has on their DA calculation.</td>
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<td>Summary and Points to Consider</td>
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| 7. | Library expenses and other users (Appendix III)                      | Appendix III, B.8.b states that in the first step of the library allocation, which is based on primary categories of users, the other user category must consist of a reasonable factor as determined by institutional records to account for all other users of library facilities.  
**POINTS TO CONSIDER:**  
1. a) Research what institutional records exist or could be generated (e.g., on-line login logs, card access, sign-in statistics, use agreements, etc.) to support the other users category. |
| 8. | The distribution basis and MTDC exclusions (Appendix III)             | Appendix III, C.2 cross-references to the definition of MTDC (Subpart A, 200.68). The definition now covers participant support costs as an MTDC exclusion (also see 200.75 and 200.456). The definition remains unchanged in regard to the portion of each subaward and subcontract in excess of $25,000 as an MTDC exclusion.  
**POINTS TO CONSIDER:**  
1. Review UG and agency definitions of participant support costs and compare to institutional definitions and policy.  
2. Consider system/accounting changes to identify and account for participant support costs that will allow for correct treatment in defining MTDC for F&A rate development purposes.  
3. Train appropriate staff (e.g., those preparing budgets for sponsored project proposals) so that F&A is not applied to participant support costs.  
4. Some agencies maintain that a vendor contract greater than $25,000 is a subcontract subject to the MTDC exclusion. Pay close attention to technical correction in the UG that may eliminate the term “subcontract” from the definition, which would clarify that the MTDC exclusion is applicable to subawards > $25,000 only. |
§1320.10 Measuring the Impact of the Uniform Guidance: Single Audit Metrics
Council on Financial Assistance Reform (COFAR)

On December 26, 2013 Office of Management and Budget (OMB) published final guidance in 2 C.F.R 200 titled Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards in order to improve the effectiveness and efficiency of Federal financial assistance. The guidance served as an instrument to better target financial risk and better direct resources in order to achieve evidence-based outcomes.

In an effort to assure effective implementation, the Council on Financial Assistance Reform (COFAR) established metrics to gauge how the guidance addressed its intended enhancements and to measure the performance of the Federal government’s work in the management of assistance in the form of Federal financial assistance. On September 30, 2014 OMB issued Memorandum M-14-17 to all executive Departments and Agency Chief Financial Officers (CFO) that manage assistance programs, and set forth requirements for the initial collection and use of administrative and audit metrics for the Uniform Guidance.

These findings for the Administrative Metrics are aggregated from twenty-one CFO Act agencies and will help establish a baseline. At this initial stage, metric collection is to inform the COFAR about the state prior to implementation of the Uniform Guidance. As outlined in Memorandum M-14-17, by January 15, 2017, OMB and the COFAR will evaluate the utility of these metrics and will consider whether it is appropriate to establish goals or target outcomes for any given metric.

### 2014 Administrative Metrics results

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<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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<tbody>
<tr>
<td>Number of OMB-approved Information Collections for Grants and Cooperative Agreements</td>
<td>856</td>
</tr>
<tr>
<td>Number of OMB-approved Exceptions Focused on Program Performance Over Compliance</td>
<td>*</td>
</tr>
<tr>
<td>Total number of new awards (grants, cooperative agreements) issued during 2014</td>
<td>131,013</td>
</tr>
<tr>
<td>Number of Fixed Amount Awards Issued **</td>
<td>5,236</td>
</tr>
<tr>
<td>Number of Agency Exceptions to the Provision of Federally Negotiated Rates</td>
<td>139</td>
</tr>
<tr>
<td>Total number of Indirect Cost Rate Agreements issued by cognizant agencies during 2014</td>
<td>5,146</td>
</tr>
<tr>
<td>Number of Indirect Cost Rate Extensions Approved by Cognizant Agencies</td>
<td>83</td>
</tr>
</tbody>
</table>

* Data not requested for this baseline metric.

** Baseline data is based on Federal awarding agencies best approximation of what they considered fixed amount awards for 2014. Prior to the implementation of the Uniform Guidance, there was no unified definition on what was considered a fixed amount award.

These Administrative Metrics will be collected annually from OMB records of exceptions and Federal awarding agency records of: information collection requests, fixed-amount awards, number of indirect cost extensions, and agency exceptions to the provision of federally negotiated rates. Federal awarding agencies are responsible for the accuracy of the data submitted to OMB and are expected to accurately report the annual metrics as required by Memorandum M-14-17.

Based on the evaluation of these indicators after the implementation of the Uni-
form Guidance, OMB and the COFAR will work with Federal agencies to gauge the success of the guidance and the performance of the Federal government’s work in the management of Federal financial assistance.

### 2014 Single Audit Metrics Results

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<thead>
<tr>
<th>Metric</th>
<th>FY 2014</th>
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<tbody>
<tr>
<td>Number of Single Audit reports – FY 2014</td>
<td>38,025</td>
</tr>
<tr>
<td>Number of Major Programs selected for audits</td>
<td>96,942</td>
</tr>
<tr>
<td>Number of Modified Opinions for Major Programs selected for audits</td>
<td>3,886</td>
</tr>
<tr>
<td>Number of Audit Findings of Material Weaknesses in Internal Controls for Major Programs selected for audits</td>
<td>4,838</td>
</tr>
<tr>
<td>Number of Repeat Findings for Higher Risk Major Programs</td>
<td>*</td>
</tr>
<tr>
<td>Number of Audit Objectives in the Compliance Supplement</td>
<td>**73</td>
</tr>
</tbody>
</table>

* Data to be collected starting FY 2015
** Audit objectives in Part 3 – Compliance Requirements of the 2014 Compliance Supplement

These Single Audit metrics results are aggregated from all the audit submissions by the auditees for FY 2014 (i.e., for fiscal year that ended between 01/01/2014 through 12/31/2014) to the Federal Audit Clearinghouse. As of 12/18/2015 we have received 38,025 audits. The metrics results will be updated in spring 2016 to provide a more complete picture as we expect that the rest of FY 2014 audits will be submitted by that date. These metrics will help establish a baseline for audits that were conducted before the effective of the Uniform Guidance and will serve to measure over time the effective implementation of the Uniform Guidance, including reductions of unnecessary administrative burden, and reductions in risks of waste, fraud and abuse. The analysis of these audit metrics will provide demonstrations of success and opportunities and needs for future revisions to the Uniform Guidance.

The next collection of the Single Audit metrics will be collected for FY 2015 (i.e., for fiscal year that ended between 01/01/2015 and 12/31/2015) in winter 2016-2017.

Based on the evaluation of these metrics after the implementation of the Uniform Guidance, OMB and the COFAR will work with Federal agencies to gauge the success of the Uniform guidance and the performance of the Federal government’s work in the audit and oversight of Federal financial assistance.

### 1330 Practical Tools

This section contains practical resources related to the ever-changing regulatory environment. The materials are culled from a variety of sources.

### 1330.1 Summary of Significant Changes to the NIH GPS for October 2017 Version

National Institutes of Health

The revised NIH Grants Policy Statement (NIHGPS, rev. 10/01/2017) represents an update to the November 2016 version and is applicable to all NIH grants and cooperative agreements beginning on or after October 1, 2017. While the update does not introduce any new material for the first time, it incorporates new and modified requirements, clarifies certain policies, and implements changes in statutes, regulations, and policies that have been implemented through appropriate legal and/or policy processes since the previous version of the NIHGPS dated November 2016. The 10/01/2017 revision supersedes, in its entirety, the NIH Grants Policy Statement (November 2016) as a standard term and condition of the award.

**Notable Policy Changes**: Implements new policies and clarification of existing policies announced in the NIH Guide since October 2016, and listed at Grants Policy & Guidance.

<table>
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<tr>
<th>Section</th>
<th>Significant Changes</th>
<th>Reason</th>
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<tbody>
<tr>
<td>PART 1: NIH Grants – General Information</td>
<td>Sec. 2.3.5 Types of Funding Opportunity Announcements: Specifies that NIH will require that all applications involving one or more clinical trials be submitted through a FOA specifically designed for clinical trials effective for applications with receipt dates on or after January 25, 2018.</td>
<td>Implements provisions announced in NOT-OD-16-147 and NOT-OD-17-043</td>
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<td>Chapter 2 – The National Institutes of Health as a Grant-Making Organization</td>
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<td>PART II: Terms and Conditions of NIH Grant Awards</td>
<td>Sec. 3.1 Federalwide Standard Terms and Conditions for Research Grants: While the language of this section has not changed, the Federalwide Research Terms and Conditions have been updated, effective April 3, 2017. Recipients are encouraged to review the updated documents at <a href="http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp">http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp</a>. NIH implementation of these Federalwide research terms and conditions has no significant change in the requirements or terms and conditions for NIH awardees.</td>
<td>As published in the Federal Register (82 FR 13660), the Federal-wide Research Terms and Conditions were updated effective April 3, 2017.</td>
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<td><strong>Chapter 4 – Public Policy Requirements, Objectives and Other Appropriation Mandates</strong></td>
<td>Sec. 4.1.3 ClinicalTrials.gov and Dissemination of NIH-Funded Clinical Trial Information Requirements: This policy applies to applications submitted on or after January 18, 2017, requesting support for the conduct of a clinical trial to be initiated on or after January 18, 2017. NIH expects all NIH-funded awardees and investigators conducting clinical trials, funded in whole or in part by the NIH, ensure that their NIH-funded clinical trials are registered at, and that summary results information is submitted to, ClinicalTrials.gov for public posting. As part of their applications, applicants seeking NIH funding will be required to submit a plan for the dissemination of NIH-funded clinical trial information that will address how the expectations of this policy will be met. NIH-funded awardees and investigators conducting clinical trials funded in whole or in part by the NIH will be required to comply with all terms and conditions of award, including following their plan for the dissemination of NIH-funded clinical trial information.</td>
<td>Implements provisions announced in NOT-OD-16-149.</td>
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<td>Sec. 4.1.4.1 Certificates of Confidentiality: Section 301(d) of the PHS Act, as amended by Section 2012 of the 21st Century Cures Act, P.L. 114-255, states that the Secretary shall issue Certificates of Confidentiality (Certificates) to investigators or institutions engaged in biomedical, behavioral, clinical, or other research activities in which identifiable, sensitive information is collected. All recipients covered by this policy are deemed to be issued a Certificate, and are therefore required to protect the privacy of individuals who are subjects of such research. NIH will no longer accept applications or issue paper certificates for NIH-funded research collecting “covered information,” as defined in the policy.</td>
<td>Implements provisions announced in NOT-OD-17-109.</td>
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<td>Sec. 4.1.15.10 NIH Policy on Good Clinical Practice Training for NIH Awardees Involved in NIH-funded Clinical Trials: Establishes the expectation that all NIH-funded investigators and staff who are involved in the conduct, oversight, or management of clinical trials should be trained in Good Clinical Practice (GCP), consistent with principles of the International Conference on Harmonisation (ICH) E6 (R2).</td>
<td>Implements provisions announced in NOT-OD-16-148.</td>
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<td>Sec. 4.2.2 Certification of Filing and Payment of Taxes has been removed. This statutory requirement is no longer in place.</td>
<td>Clarifies legislative mandates in effect as outlined in NOT-OD-17-075</td>
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<tr>
<td><strong>Chapter 8 – Administrative Requirements</strong></td>
<td>Sec. 8.1.2.5 Change in Scope: The prior approval requirement for changes from “No Clinical Trial” to “Includes Clinical Trial” has changed. This project change now requires submission of a competitive revision application, to a FOA which accepts clinical trials.</td>
<td>Implements provisions announced in NOT-OD-16-147 and NOT-OD-17-043</td>
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<td>Sec. 8.2.5 Interim Research Products:</td>
<td>This section outlines reporting instructions to allow investigators to cite their interim research products and claim them as products of NIH funding.</td>
<td>Implements provisions announced in NOT-OD-17-50</td>
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<td>8.4.1.4 Final Research Performance Progress Report: Effective January 1, 2017 (June 30, 2017, for SBIR/STTR awards) the Final RPPR has replaced the final progress report for closeout. NIH is no longer accepting Final Progress Reports. This section has been updated to provide guidance on the submission of Final and Interim RPPRs. Corresponding changes made to: 8.6, 11.3.13.4, 18.5.5.5</td>
<td>Implements provisions announced in NOT-OD-17-022, NOT-OD-17-037 and NOT-OD-17-085.</td>
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<td>Sec. 8.6.2 Final Research Performance Progress Report: Removes previous NIH Type 2 policy, which allowed progress reports submitted in Type 2 applications to serve in lieu of a separate final progress report. NIH now requires that organizations submit an “interim-RPPR” while their renewal (Type 2) application is under consideration. In the event that the Type 2 is funded, NIH will treat the Interim-RPPR as the annual performance report for the final year of the previous competitive segment. If the Type 2 is not funded, the Interim-RPPR will be treated by NIH staff as the institution’s Final-RPPR.</td>
<td>Implements provisions announced in NOT-OD-17-022, and NOT-OD-17-037.</td>
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<td>Chapter 11 - Ruth L. Kirschstein National Research Service Awards</td>
<td>Sections 11.2 and 11.3 Individual Fellowships and Institutional Research Training Grants: Updated language to clarify part-time work requirements for trainees and fellows. Fellows and trainees may spend on average, an additional 25% of their time (e.g., 10 hours per week) in part time research, teaching, or clinical employment, so long as those activities do not interfere with, or lengthen, the duration of their NRSA training.</td>
<td>Implements provisions announced in NOT-OD-17-095</td>
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<td>Chapter 12 – Research Career Development (“K”) Awards</td>
<td>Sec 12.8.1 Salaries and Fringe Benefits: Update language to implement new guidance regarding non-career development award (CDA) effort. For effort not directly committed to the mentored CDA, CDA recipients may devote effort, with compensation, on Federal or non-Federal sources as the Program Director/Principal Investigator (PD/ PI) or in another role (e.g., co-Investigator), as long the specific aims of the other supporting grant(s) differ from those of the CDA. Corresponding change made to: 12.3.6.3</td>
<td>Implements provisions announced in NOT-OD-17-094</td>
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<td><strong>Chapter 16 – Grants to Foreign Organizations, and Domestic Grants with Foreign Components</strong></td>
<td>Sec. 16.6 Allowable and Unallowable Costs: Update the language regarding allowable F&amp;A costs, to reflect changes to 45 CFR 75 implemented on January 11, 2017. F&amp;A costs under grants to foreign and international organizations will be funded at a fixed rate of 8 percent of modified total direct costs, exclusive of tuition and related fees, direct expenditures for equipment, and subawards in excess of $25,000. These funds are paid to support the costs of compliance with federal requirements. Awards to domestic organizations with a foreign or international consortium participant may include 8 percent of modified total direct costs, exclusive of tuition and related fees, direct expenditures for equipment, and subawards in excess of $25,000. These funds are paid to support the costs of compliance with federal requirements.</td>
<td>Implements changes to 45 CFR 75.414(ii), effective January 11, 2017 (81 FR 89393).</td>
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<tr>
<td><strong>Chapter 17 – Grants to Federal Institutions and Payments to Federal Employees Under Grants</strong></td>
<td>Section 17.5 Payment: NIH Office of Financial Management will continue payments of grants and cooperative agreements to Federal departments and agencies through the Interagency Payment and Collection method (IPAC) rather than through the Payment Management System. Federal recipients are not required to complete the Federal cash transactions section of the Federal Financial Report (FFR). Corresponding change made to: 17.7.4.</td>
<td>Implements provisions announced in NOT-OD-17-052.</td>
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</table>
1330.2 Significant Changes and Clarifications to the NSF PAPPG, NSF 18-1
National Science Foundation

Overall Document
◆ Editorial changes have been made to either clarify or enhance the intended meaning of a sentence or section. The document has been updated to ensure consistency with data contained in NSF systems or guidance located in other NSF or Federal policy documents. Throughout the PAPPG, website, address and document references and organizational names have been updated to reflect current information.

Significant Changes
◆ Chapter I.E, Who May Submit Proposals, incorporates new coverage on the eligibility of international branch campuses of US institutions of higher education. The definition of colleges and universities in Chapter I.E.1 has been updated to now refer to institutions of higher education, for consistency with 2 CFR § 200. In addition, changes have been made to the eligibility requirements for foreign organizations.

◆ Chapter II.C.1.e, Collaborators & Other Affiliations Information, has been significantly revised to request information regarding collaborators and other affiliations (COA) be provided through use of a standard NSF COA template. Footnotes also have been added to address frequently asked questions relating to the new COA template.

◆ Chapter II.C.2.d, Project Description, has been modified to reflect that the Project Description must now contain a separate section specifically identified as “Intellectual Merit”.

◆ Chapter II.C.2.g, Budget and Budget Justification, has been revised to increase the number of pages allowed for the budget justification to no more than five pages per proposal. This change applies to budget justifications for both proposers and subawardees.

◆ Chapter VII.A.2, Grantee Notifications to NSF, has been restructured to remove information on requests for NSF approval. In addition, Exhibit VII-1 has been deleted, as coverage on grantee requests for approval from NSF is contained in the Research Terms and Conditions Appendix A and Chapter X.A.3.

◆ Chapter X.A.3, Prior Written Approvals, has been updated to reference the Research Terms and Conditions Appendix A, which is the authoritative source of NSF prior approval requirements.

Clarifications and Other Changes
◆ Section B, Foreword, has been modified to refer to the applicable standard grant conditions, instead of solely the NSF Grant General Conditions, now that the Research Terms and Conditions have been implemented.
◆ Section D, Definitions & NSF-Grantee Relationships, provides additional guidance on the types of cooperative agreements awarded by NSF.

◆ Section E, NSF Organizations, has been revised to reflect the current responsibilities of the organizations that are normally of most direct interest to the NSF proposer and grantee community.

◆ Chapter II.C.1.f, Submission of Proposals by Former NSF Staff, incorporates new coverage to address submission of proposals from former NSF staff and the procedures that must be followed in such circumstances.

◆ Chapter II.C.2.d(iii), Results from Prior NSF Support, clarifies the timeframe during which any PI or co-PI that has received NSF support must report on such funding. Chapter II.E.7 on conference proposals, II.E.8 on equipment proposals, II.E.9 on travel proposals and Exhibit II-1, the Proposal Preparation Checklist, also have been updated with this guidance.

◆ Chapter II.C.2.g(i)(a), Senior Personnel Salaries & Wages Policy, has been supplemented with guidance that reflects it is the proposing organization’s responsibility to define and apply the term “year” and include the definition in the budget justification.

◆ Chapter II.C.2.g(viii), Indirect Costs, has been updated to state that amounts for indirect costs should be specified in the budget justification.

◆ Chapter II.C.2.j, Special Information and Supplementary Documentation, includes additional guidance on the content for data management plans that involve collaborative activities.

◆ Chapter II.D.4, Proposals Involving Vertebrate Animals, has been revised to enhance the clarity of guidance on the use of vertebrate animals for research or education on NSF supported projects. For projects at an international organization that involve the use of vertebrate animals, a statement from the international organization will need to be provided.

◆ Chapter II.D.5, Proposals Involving Human Subjects, has been supplemented with additional language regarding international projects.

◆ Chapters II.D.6 and XI.B.5, Life Sciences Dual Use Research of Concern (DURC), include new coverage regarding NSF’s funding of research that would be considered to lead to a gain of function of agents. The title of these sections also has been changed for consistency with the US Government Policy for Institutional Oversight of Life Sciences Dual Use Research of Concern.

◆ Chapter II.E.11, Research Infrastructure Proposal, has been revised to reflect current practices and provide greater clarity in the description of these types of proposals.

◆ Exhibit II-1, Proposal Preparation Checklist, has been updated to reflect relevant changes made to Chapter II of the PAPPG. Additional checklist components also have been added to assist proposers in the pre-submission administrative review of proposals to NSF.
◆ Chapter V, Renewal Proposals, has been modified to update reference information regarding recompetition of expiring awards. Section B on Accomplishment-Based Renewals has been updated to provide greater clarity regarding the submission of reprints.

◆ Chapter VII.B.2.e, Substitute (Change) PI/PD or co-PI/co-PD, has been supplemented with guidance on the reappointment of prior NSF staff as PI.

◆ Chapter VII.B.3, Subawarding or Transferring Part of an NSF Award (Subaward), has been modified for consistency with terminology in 2 CFR § 200.

◆ Chapter VII.D.2, Final Project Report, has been updated to reflect that when PIs submit the report, they are indicating that the scope of work is complete and no further administrative actions are anticipated on the grant.

◆ Chapter VIII.E.6, Award Financial Reporting Requirements and Final Disbursements, has been supplemented to clarify the intent of NSF notifications regarding canceling appropriations.

◆ Chapter X.B, Direct Costs and X.C, Other Direct Costs, have been modified to remove coverage that is redundant with 2 CFR § 200 and other sections of the PAPPG. Terminology on rearrangement and reconversion costs has been updated for consistency with 2 CFR § 200.462.

◆ Chapter XI.A, Non-Discrimination Statutes and Regulations, has been revised to provide current information on NSF grantee obligations to comply with civil rights laws and regulations. These changes provide NSF grantees and applicants for NSF grants with an overview of relevant civil rights regulatory obligations and compliance mechanisms. Information also has been included on how grantee program participants can file complaints with NSF alleging discrimination in an NSF grantee’s programs.

◆ Chapter XI.B.1, Human Subjects and XI.B.3, Vertebrate Animals, include the relevant new award-specific condition on organizational responsibilities. In addition, language has been added on post-award responsibilities.

◆ Chapter XI.D.1.d, Intellectual Property, has been updated to specify that grantees are required to use iEdison to disclose NSF subject inventions. In addition, NSF now reserves the option to request an Annual Utilization Report or a Final Invention Statement and Certification.

◆ Chapter XI.M.4, Executive Order 13788, Buy American and Hire American, is a new section which serves as NSF’s implementation of Executive Order 13788.

1330.3 NSF FAQs on Proposal Preparation and Award Administration
National Science Foundation

A

Frequently Asked Questions (FAQs)

What should I do if I notice an error in a proposal I just submitted via FastLane?
It is the responsibility of the proposing organization to thoroughly review each proposal prior to submission. On occasion, however, a problem is identified with a portion of the proposal after the proposal has been submitted electronically to NSF. The FastLane Proposal File Update Module allows the organization to request the replacement of files or revision of other Proposal Attributes, associated with a previously submitted proposal. A request for a proposal file update must be submitted by an Authorized Organizational Representative (AOR). The Proposal File Update module, however, may not be used for submission of revised budgets. All budgetary revisions must be submitted through use of the FastLane Revised Proposal Budget Module. More information on and submission procedures for proposal file updates can be found in the Proposal & Award Policies & Procedures Guide (PAPPG) Chapter III.C.

Audit Reports

Where should copies of audits required by 2 CFR § 200, Subpart F be sent?
In accordance with 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards (Uniform Guidance), grantees that are states, local governments or non-profit organizations must submit copies of their audit reports to the Federal Audit Clearinghouse (FAC). See 2 CFR § 200.512(b) for additional information.

Award Administration

Where can I find information regarding post-award issues?
Information regarding pre-award costs, required notifications and prior approvals, extensions, transfer of the award, reporting requirements and other award administration requirements can be found by accessing the applicable award conditions on the NSF website. Additional information regarding the award and administration of NSF grants and cooperative agreements may be found in Part II of the Proposal & Award Policies & Procedures Guide (PAPPG).

B

Biographical Sketches

Instructions for the Biographical Sketch(es), Products section indicate that “acceptable
products must be citable and accessible.” Accessibility may be difficult to accomplish in the case of manuscripts submitted or accepted for publication and other documents and materials. Access may need to be provided through organizational or personal websites. Will that be sufficient to meet the proposal submission requirements?

The language was changed from “publications” to “products” in order to allow proposers to receive appropriate credit for research products that may not be traditional publications. The requirement that all products be “citable and accessible” is not a submission requirement, in the sense of blocking a proposal from consideration, but a definition of the standard to which proposers should adhere. It was introduced because of experience with citations that are not readily available, including web references that are inaccessible or out of date, and is intended to indicate that such mistakes have demonstrably downgraded a proposal in the judgment of reviewers. References to websites, even private ones, are appropriate, provided that the site is available for a reasonable percentage of the time. Such material is often the best way to demonstrate the applicant’s ability to carry out the project.

For Biographical Sketch(es), now that “Publications” has become “Products,” are proposers still limited to the same number of Products as they were Publications?

Yes. The proposer may include up to five products most closely related to the proposed project and up to five other significant products, whether or not related to the proposed project.

C

Categories of Funding Opportunities

What types of mechanisms does NSF use to generate proposals? In what scenario is each mechanism used?

NSF utilizes a variety of mechanisms to generate proposals. There are four categories of funding opportunities: Dear Colleague Letters, Program Descriptions, Program Announcements and Program Solicitations. For a description of each category and further information, see PAPPG Chapter I.C.

CFDA Numbers

What is the CFDA number and where can a proposer find it?

The Catalog of Federal Domestic Assistance (CFDA) profiles all Federal grant programs and is jointly issued by the Office of Management and Budget (OMB) and the General Services Administration (GSA). The Catalog is available for reference in the Government documents section of most major libraries and in the offices of state and local governments. The CFDA number is important for tracking and audit purposes. The applicable CFDA number is identified in the Summary section of NSF program announcements and solicitations. A complete listing of NSF CFDA numbers, by Division, is included on the DIAS/Policy Office website.
Collaborative Proposals

What is a collaborative proposal?
A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. Collaborative proposals may be submitted to NSF in one of two methods: as a single proposal, in which a single award is being requested (with subawards administered by the lead organization); or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award. All components of the collaborative proposal must meet any established deadline, and, failure to do so may result in the entire collaborative proposal being returned without review. PAPPG Chapter II.D.3 contains additional information and instructions regarding collaborative proposals.

Concurrent Proposals

Can a proposer submit the same proposal to different organizations within NSF for simultaneous review?
Only one submission should be provided to NSF even if review by multiple programs is envisioned. Proposers may indicate on the Cover Sheet which NSF organizational unit(s) they believe would be most appropriate for proposal review. However, NSF will determine which program will evaluate each proposal. The submission of duplicate or substantially similar proposals concurrently for review by more than one program without prior NSF approval may result in the return of the redundant proposal(s). (Reference PAPPG Chapter IV.B).

Can the same proposal submitted to NSF be submitted to other agencies for simultaneous review?
Generally, proposals may be submitted to other agencies for simultaneous review. Research proposals (not proposals for conferences or workshops) to the Biological Sciences Directorate, however, cannot be duplicates of proposals to any other Federal agency for simultaneous consideration. The only exceptions to the rule for research proposals submitted to the Biological Sciences Directorate are: (1) when the proposers and program managers at relevant Federal agencies have previously agreed to joint review and possible joint funding of the proposal; or (2) proposals for PIs who are beginning investigators (individuals who have not been a principal investigator (PI) or co-principal investigator (co-PI) on a Federally funded award with the exception of doctoral dissertation, postdoctoral fellowship, or research planning grants). For proposers who qualify under this latter exception, the box for “Beginning Investigator” must be checked on the proposal Cover Sheet. (Reference PAPPG Chapter II.D.2).

Conference, Symposia and Workshop Proposals

Can I submit a proposal for NSF funding to conduct a conference, symposia or workshop?
NSF supports conferences, symposia and workshops in special areas of science
and engineering that bring experts together to discuss recent research or education findings or to expose other researchers or students to new research and education techniques. Requests generally should be made at least a year in advance of the scheduled date. See PAPPG Chapter II.E.7 for additional information. Conferences or meetings, including the facilities in which they are held, funded in whole or in part with NSF funds, must be accessible to participants with disabilities.

Should I include conference speaker fees in the participant support costs section of the budget?
The participant support category of the budget is for the support of participants or trainees only. Speakers and trainers are not considered participants in the conference/training event, therefore, the cost of speakers or trainers should not be included in the participant support cost section of the budget.

Confidential Budgetary Information

How do I indicate in my proposal if I do not want salary information to be released to people outside the Government?
The proposing organization may request that salary data on senior personnel not be released to persons outside the Government during the review process. In such cases, the item for senior personnel salaries in the proposal budget may appear as a single figure and the person-months represented by that amount omitted. If this option is exercised, senior personnel salaries and person-months must be itemized in a separate statement, and forwarded to NSF in accordance with the instructions specified in the PAPPG Chapter II.D.1, Proprietary or Privileged Information.

Consultant Rate

Is there a limitation on payments to consultants under NSF awards?
No, there is no limitation on payments to consultants under NSF awards. Payment for consultant services should be comparable to the normal or customary fees charged and received by the consultant for comparable services, especially on non-Government contracts and grants. See PAPPG Chapter II.C.2.g(vi)(c) and 2 CFR § 200.459, Professional Services, for additional information.

Cost Sharing

Where can I find more information on NSF’s cost sharing policy?
The National Science Board issued a report entitled “Investing in the Future: NSF Cost Sharing Policies for a Robust Federal Research Enterprise” (NSB 09-20, August 3, 2009), which contained eight recommendations for NSF regarding cost sharing. In implementation of the Board’s recommendations, NSF’s revised guidance (see PAPPG Chapter II.C.2.g(xii)) is as follows:

- Except where required by a program solicitation, inclusion of voluntary committed cost sharing is prohibited.
◆ When cost sharing is required by the Foundation, included on Line M of the proposal budget and accepted by NSF, the commitment of funds becomes legally binding and is subject to audit. Failure to provide the level of cost sharing required by the NSF solicitation and reflected in the approved award budget may result in termination of the NSF award, disallowance of award costs and/or refund of award funds to NSF by the grantee.

More information can be found in PAPPG Chapter II.C.2.g(xii) and Chapter VII.C.

_The Proposal & Award Policies & Procedures Guide (PAPPG) Chapter II.C.2.g.(viii) states that, “Except where specifically identified in an NSF program solicitation, the applicable US Federally negotiated indirect cost rate(s) must be used in computing indirect costs (F&A) for a proposal.” Does this mean that organizations cannot request a reduced or waived rate because this would constitute voluntary committed cost sharing?_

Yes. Unless required by an NSF program solicitation, the organization’s current negotiated indirect cost rate agreement must be used in computing indirect costs for a proposal. Otherwise, foregoing full indirect cost rate recovery would be considered voluntary committed cost sharing and is therefore prohibited by NSF.

**What is the distinction between voluntary committed cost sharing and voluntary uncommitted cost sharing?**

As stipulated in 2 CFR § 200.99, “Voluntary committed cost sharing means cost sharing specifically pledged on a voluntary basis in the proposal’s budget or the Federal award on the part of the non-Federal entity and that becomes a binding requirement of Federal award.” As such, to be considered voluntary committed cost sharing, the amount must appear on the NSF proposal budget and be specifically identified in the approved NSF budget (inclusion in the budget justification also meets this definition). Unless cost sharing is required by a specific NSF program, inclusion of voluntary committed cost sharing is prohibited and Line M on the proposal budget will not be available for use by the proposer. NSF Program Officers are not authorized to impose or encourage cost sharing unless such requirements are explicitly included in the program solicitation. A complete listing of NSF programs that require cost sharing is available on the NSF website at: http://www.nsf.gov/bfa/dias/policy/.

In order for NSF, and its reviewers, to assess the scope of a proposed project, all organizational resources necessary for, and available to, a project must be described in the Facilities, Equipment and Other Resources section of the proposal (see PAPPG Chapter II.C.2.i for further information). While not required by NSF, the grantee may, at their own discretion, continue to contribute voluntary uncommitted cost sharing to NSF-sponsored projects. As noted above, however, these resources are not auditable by NSF and should not be included in the proposal budget or budget justification.

_Where can the PI describe the time they’ll spend if they don’t request salary?_

The Facilities, Equipment and Other Resources section should contain an aggregated description of the resources that the organization will provide to the project (both
physical and personnel), should it be funded. The description should be narrative in nature and must not include any quantifiable financial information.

D

Data Management Plan

Where can I find more information about the requirement for a data management plan? PAPPG Chapter II.C.2.j reflects NSF’s long standing data policy. All proposals must describe plans for data management and sharing of the products of research, or assert the absence of the need for such plans. FastLane will not permit submission of a proposal that is missing a Data Management Plan. The Data Management Plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate.

For a separately submitted collaborative proposal, do non-lead organizations need to submit a data management plan?

No. The lead organization should submit one data management plan for all the collaborating organizations. A non-lead organization does not need to submit a data management plan for a separately submitted collaborative proposal. More information can be found in PAPPG Chapter II.D.3.

Deviation Authorization

What is the process for requesting authorization of a deviation from the PAPPG proposal preparation instructions?

Deviations from NSF proposal preparation and processing instructions may be authorized in one of two ways:

1. through specification of different requirements in an NSF solicitation; or

2. by the written approval of the cognizant NSF Assistant Director/Office Head or designee. These approvals to deviate from NSF proposal preparation instructions may cover a particular program or programs or, in rare instances, an “individual” deviation for a particular proposal.

Proposers may deviate from these instructions only to the extent authorized. Proposals must include an authorization to deviate from standard NSF proposal preparation instructions in one of the following ways as appropriate: (a) by identifying the solicitation number that authorized the deviation in the appropriate block on the Cover Sheet; or (b) for individual deviations, by identifying the name, date and title of the NSF official authorizing the deviation. (Reference PAPPG Chapter II.A).

Drug-Free Workplace Certification

Where can I find the complete text of the Drug-Free Workplace Certification?

The full text of the Drug-Free Workplace Certification can be found in PAPPG Exhibit II-3.
**E**

**EARly-concept Grants for Exploratory Research (EAGER)**

What is an EAGER proposal, and where can I find information about submitting this type of proposal?

The EAGER type of proposal may be used to support exploratory work in its early stages on untested, but potentially transformative, research ideas or approaches. This work may be considered especially “high risk-high payoff” in the sense that it, for example, involves radically different approaches, applies new expertise, or engages novel disciplinary or interdisciplinary perspectives. These exploratory proposals may also be submitted directly to an NSF program, but the EAGER type of proposal should not be used for projects that are appropriate for submission as “regular” (i.e., non-EAGER) NSF proposals. PI(s) must contact the NSF Program Officer(s) whose expertise is most germane to the proposal topic prior to submission of an EAGER proposal. This will aid in determining the appropriateness of the work for consideration under the EAGER program; this suitability must be assessed early in the process.

More information about the EAGER program can be found in PAPPG Chapter II.E.2.

**Electronic Submission**

Am I required to use FastLane to prepare and submit my proposal to NSF?

Unless otherwise specified in the program solicitation, proposers may opt to submit a proposal electronically either via Grants.gov or via the NSF FastLane system. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online. In determining which method to utilize in the electronic preparation and submission of a proposal, proposers should be aware that all collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

For proposers who cannot submit electronically, a deviation must be approved in advance of submission of the paper proposal in accordance with PAPPG Chapter II.A.

Must the awardee organization code and the Data Universal Numbering System (DUNS) number be entered on the proposal Cover Sheet?

The awardee organization name, address, DUNS number and Employer Identification Number/Taxpayer Identification Number are derived from the login information and therefore do not need to manually be entered when preparing the Cover Sheet.

What is the box for “International Cooperative Activities: Country/Countries” used for on the Cover Sheet?
The box for “International Cooperative Activities: Country/Countries” on the Cover Sheet is used to assist NSF program staff in identifying the appropriate Office of International Science and Engineering (OISE) country-specific point of contact. OISE staff serve as a resource for NSF directorates with projects that involve international cooperative activities. An international activity is defined as research, training and/or education carried out in cooperation with foreign counterparts either overseas or in the US using virtual technologies. Proposers also should enter the country/countries with which project participants will engage and/or travel to attend international conferences. (Reference PAPPG Chapter II.C.2.a)

When should a SF LLL, Disclosure of Lobbying Activities, be submitted?

The Disclosure of Lobbying Activities form, SF LLL, is required when the proposal exceeds $100,000 and the conditions in paragraph (2) of the certification are met. Specifically, if any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence a Government employee, Member or employee of Congress in connection with a specific Federal grant or cooperative agreement. (Reference PAPPG Chapter II.C.1.d and Exhibit II-5).

**Eligibility**

*Can an award be made to an individual?*

Unaffiliated individuals in the US and US citizens rarely receive direct funding support from NSF. Recipients of Federal funds must be able to demonstrate their ability to fully comply with the requirements specified in 2 CFR § 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards. As such, unaffiliated individuals are strongly encouraged to affiliate with an organization that is able to meet the requirements specified in 2 CFR § 200.

Unaffiliated individuals must contact the cognizant Program Officer prior to preparing and submitting a proposal to NSF. (Reference PAPPG Chapter I.E.5).

*Can an individual who is not a U.S. citizen serve as a Principal Investigator on a proposal?*

Except for NSF fellowships, which by statute can be made only to citizens, nationals, or lawfully admitted permanent resident aliens of the United States, there is no general policy restricting involvement on NSF grants based on nationality. A proposing organization in the U.S. may designate as Principal Investigator anyone it believes to be capable of fulfilling the role.

*Can an award be made directly to a foreign organization?*

NSF rarely provides support directly to foreign organizations. NSF, however, will consider proposals for cooperative projects involving U.S. and foreign organizations, provided direct support is requested only for the U.S. portion of the collaborative effort. Foreign organizations can participate as subawards on an NSF award made to a domestic organization. (Reference PAPPG Chapter I.E.6).
Can a person from a non-U.S. organization be a co-PI on a project?
There is no general prohibition against someone from a non-U.S. organization serving as a co-PI on an NSF project. NSF does allow subawards to non-U.S. organizations and per PAPPG Chapter II.D.3.a, collaborators from the subaward organization may be named as co-PIs under the prime’s proposal (although that is at the discretion of the prime). Proposers should check their organizational policies regarding PI/co-PI eligibility to determine whether the organization permits non-employees to serve in this capacity. In addition, proposers should review the relevant program solicitation, if applicable, to ensure that there are no additional eligibility requirements that restrict co-PI eligibility.

Can a Federal agency apply directly for an NSF award?
NSF does not normally support research or education activities by scientists, engineers or educators employed by Federal agencies or Federally Funded Research and Development Centers (FFRDCs). A scientist, engineer or educator, however, who has a joint appointment with a university and a Federal agency (such as a Veterans Administration Hospital, or with a university and an FFRDC) may submit proposals through the university and may receive support if he/she is a bona fide faculty member of the university, although part of his/her salary may be provided by the Federal agency. Under unusual circumstances, other Federal agencies and FFRDCs may submit proposals directly to NSF. Preliminary inquiry should be made to the appropriate program before preparing a proposal for submission. (Reference PAPPG Chapter I.E.7).

Can different campuses of the same university system submit separate proposals in response to a program solicitation that limits the number of proposals to one per organization?
NSF’s long-standing stance on the definition of “organization” is that, in addition to having its own DUNS number and being registered in FastLane, organizations must have separate Sponsored Projects Offices that have the ability to submit proposals directly to NSF. The campus would need to be listed as the awardee organization on the NSF Cover Sheet and if all of the above criteria are met, that organization would be considered independent for purposes of solicitations that have limited submissions.

Equipment Proposals

Does NSF fund proposals for the specific purpose of purchasing equipment or instrumentation?
Proposals for specialized equipment may be submitted by an organization. More information regarding how to apply for equipment proposals can be found in PAPPG Chapter II.E.8.
Facilitation Awards for Scientists and Engineers with Disabilities (FASED)

What are the Facilitation Awards for Scientists and Engineers with Disabilities (FASED) and how can a proposer/grantee apply for one?

As part of its effort to promote full utilization of highly qualified scientists, mathematicians and engineers, and to develop scientific and technical talent, the Foundation has the following goals:

◆ to reduce or remove barriers to participation in research and training by persons with physical disabilities by providing special equipment and assistance under awards made by NSF; and

◆ to encourage persons with disabilities to pursue careers in science and engineering by stimulating the development and demonstration of special equipment that facilitates their work performance.

Requests can be made in conjunction with regular competitive proposals, or as a supplemental funding request to an existing NSF award. Specific instructions for each type of request can be found in PAPPG Chapter II.E.6.

Facilities and Administrative (F&A) Costs (see Indirect Costs)
Facilities, Equipment and Other Resources

What should be included in the Facilities, Equipment and Other Resources section of the proposal?

This section of the proposal is used to assess the adequacy of the resources available to perform the effort proposed to satisfy both Intellectual Merit and Broader Impacts review criteria. Proposers should describe only those resources that are directly applicable. Proposers should include an aggregated description of the internal and external resources (both physical and personnel) that the organization and its collaborators will provide to the project, should it be funded. Such information must be provided in this section, in lieu of other parts of the proposal (e.g., budget justification, project description). The description should be narrative in nature and must not include any quantifiable financial information. Reviewers will evaluate the information during the merit review process and the cognizant NSF Program Officer will review it for programmatic and technical sufficiency.

Although these resources are not considered cost sharing as defined in 2 CFR § 200.99, the Foundation does expect that the resources identified in the Facilities, Equipment and Other Resources section will be provided, or made available, should the proposal be funded.

If there are no Facilities, Equipment and Other Resources to describe, a statement to that effect should be included in this section of the proposal and uploaded into FastLane.

Is an organization obligated to provide the resources described in the Facilities, Equipment and Other Resources section, should an award be made? What should a grantee do if they
cannot provide some of those resources?
The resources described in the Facilities, Equipment and Other Resources section are evaluated during the merit review process and, as such, NSF does have an expectation that they will be made available, should the proposal be funded. Therefore, organizations do need to ensure that they are provided if an award is made.

Should a grantee not be able to provide some of those resources, they should discuss the situation with the cognizant NSF Program Officer. Prior NSF approval is required for any change to the Facilities, Equipment and Other Resources section of an approved proposal that would constitute a change in objectives, scope or methodology (Reference PAPPG Chapter VII.B.1 for further information).

**FastLane System**

What is FastLane? Where can a proposer find more information?
The NSF FastLane system uses Internet/Web technology to facilitate the way NSF does business with the research, education and related communities. The NSF FastLane system is available for proposal preparation; submission and status checking; and some post-award administrative activities. All project reporting and many post-award administrative activities have been moved from FastLane to Research.gov. All FastLane functions are available at: http://www.fastlane.nsf.gov. All Research.gov functions are available at: https://www.research.gov/.

Am I required to use FastLane to prepare and submit my proposal to NSF?
Unless otherwise specified in a program solicitation, proposers may opt to submit proposals electronically either via Grants.gov or via the NSF FastLane system. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online. In determining which method to utilize in the electronic preparation and submission of a proposal, proposers should be aware that all collaborative proposals submitted as separate submissions from multiple organizations must be submitted via the NSF FastLane system. PAPPG Chapter II.D.3 provides additional information on collaborative proposals.

Where should questions be directed on use of the NSF FastLane system?
Questions related to use of the NSF FastLane system may be directed to the FastLane Help Desk at (800) 673-6188 or (703) 292-8142 or by sending an e-mail message to fastlane@nsf.gov.

In addition, for information on the availability of the NSF FastLane system, phone (800) 437-7408 for a recorded message.

**Final Project Report**

Why does Research.gov say that my final report is due 90 days after the award end date? I thought I had 120 days.
The final project report and project outcomes report should be submitted no later than 120 days following the end date of the award for all new NSF awards and
funding amendments to existing NSF awards made on or after January 25, 2016. If the award has not received a funding amendment since January 25, 2016, the final project report and project outcomes report is due no later than 90 days following the end date of the award. The reporting conditions relevant to the award are referenced in the award notice; the Research.gov system reflects the requirement applicable to the award.

**Fringe Benefits**

*Can proposers use projected fringe benefit rates when submitting budgets to NSF?*

Generally, proposers should be using their currently approved fringe benefit rate for budgeting purposes.

NSF policy does allow awardees to re-budget funds, within the award, to cover fringe benefit costs that are finalized higher than budgeted. Therefore, if funds under the award are available, the actual fringe rates may be charged.

**G**

**Grant Opportunities for Academic Liaison with Industry (GOALI)**

*What is a GOALI proposal and where can I find information about submitting this type of proposal?*

A GOALI type of proposal may be used to support projects that seek to stimulate collaboration between academic research institutions and industry. Under this proposal type, academic scientists and engineers request funding either in conjunction with a regular proposal submitted to a standing NSF program or as a supplemental funding request to an existing NSF-funded award. GOALI is not a separate program; GOALI proposals must be submitted to an active NSF funding opportunity and must be submitted in accordance with the deadlines specified therein. A proposer interested in submitting a GOALI proposal or a GOALI supplemental funding request to an existing NSF-funded award must contact the cognizant NSF Program Officer listed in the relevant funding opportunity prior to submission.

More information about the GOALI type of proposal can be found in PAPPG Chapter II.E.4.

**Grants.gov**

*What is Grants.gov and where can I learn more about it?*


**Group Proposals**

*May group proposals exceed the 15 page Project Description limitation?*
NSF encourages submission of proposals by groups of investigators; often these are submitted to carry out interdisciplinary projects. Unless stipulated in a specific program solicitation, group proposals are subject to the 15 page Project Description limitation established in PAPPG Chapter II.C.2.d. PIs who wish to exceed the established page limitations for the Project Description must request and receive a deviation in advance of proposal submission. (Reference PAPPG Chapter II.A).

H

Human Subjects

What is NSF’s policy on the use of human subjects in research?

Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the relevant Federal policy known as the Common Rule (Federal Policy for the Protection of Human Subjects, 45 CFR 690). All projects involving human subjects must either (1) have approval from the organization’s Institutional Review Board (IRB) before issuance of an NSF award or, (2) must affirm that the IRB has declared the research exempt from IRB review, in accordance with the applicable subsection, as established in section 101(b) of the Common Rule.

For projects lacking definite plans for the use of human subjects, their data or their specimens, pursuant to 45 CFR 690.118, NSF can accept a determination notice that establishes a limited time period under which the PI may conduct preliminary or conceptual work that does not involve human subjects. An NSF-approved format for submission of these determination notices is available on the NSF website. (Reference PAPPG Chapter II.D.5).

Additional information, including Frequently Asked Questions and Vignettes, for use in interpreting the Common Rule for Behavioral and Social Science Research, is available on the NSF Website.

I

Grants for Ideas Lab

What is an Ideas Lab proposal and where can I find information about submitting this type of proposal?

“Ideas Lab” is a type of proposal to support the development and implementation of creative and innovative project ideas that have the potential to transform research paradigms and/or solve intractable problems. An Ideas Lab may be run independently, or in parallel, with the issuance of an NSF funding opportunity on the same topic. These project ideas typically will be high-risk/high-impact, as they represent new and unproven ideas, approaches and/or technologies.

More information about the Ideas Lab type of proposal can be found in PAPPG Chapter II.E.5.
Indirect Costs (Facilities and Administrative (F&A) Costs)

If the fixed predetermined indirect cost rate changes during the life of the award, may a grantee charge indirect costs to NSF awards based on newly negotiated rates in effect at the time the charges were incurred?

Colleges, universities and other institutions of higher education are subject to 2 CFR § 200, Appendix III, paragraph C.7, which specifies that Federal agencies are required to use the negotiated F&A rate that is in effect at the time of the initial award throughout the life of the award.

Other proposing organizations, however, are not bound by this restriction on the use of a fixed rate in effect at the time of the initial award. These organizations may charge indirect costs based on newly negotiated rates in effect at the time the costs are incurred, provided this will not affect the scope, increase award costs, decrease the period of support, or otherwise be inconsistent with the indirect cost rate provisions of the award.

Given the complex nature of the above question, can an example be provided to better illustrate the correct application of the indirect cost rate for a college or university?

A college or university submits a proposal to NSF for consideration in April and at that time, their approved predetermined indirect cost rate is 45%. In June of that year, they negotiate a new rate with their cognizant agency. The new agreement contains the following rates:

- Predetermined: July 1, 2017 through June 30, 2018 47%
- Predetermined: July 1, 2018 through June 30, 2019 50%

If the proposal is funded in September, they can use the 47% rate. In fact, for any award made after July 1, 2017, they can re-budget and claim indirect costs at the 47% rate.

If, however, the rate agreement will be negotiated again in 2017 and the resulting rate agreement is more than what was previously approved, the higher rate cannot be applied to an award that was made before the effective date of the new F&A rate agreement. In accordance with 2 CFR § 200, Appendix III, paragraph C.7, a college or university cannot re-budget for indirect cost rate changes negotiated after the award was made.

PAPPG Chapter II.C.2.g(viii) states, “Except where specifically identified in an NSF program solicitation, the applicable US Federally negotiated indirect cost rate(s) must be used in computing indirect costs (F&A) for a proposal.” Does this mean that a college or university is required to claim the entirety of its negotiated indirect cost rate?

Yes. Unless specified in an NSF program solicitation, an organization must use its current negotiated indirect cost rate agreement in computing indirect costs for a proposal.

Information Sources

Where can a proposer find general information about NSF programs and funding opportunities?
Information on a variety of funding opportunities is located on the NSF home page under “Funding.”

Individual program descriptions, announcements and solicitations address specific areas that NSF is interested in funding. These funding opportunities may be accessed electronically on the NSF Website.

What is the NSF Update service and what is the process for signing up?
The NSF Update service is an information-delivery system designed to keep potential proposers and other interested parties apprised of the issuance of new program announcements and solicitations (as well as other NSF publications and policies). Subscribers receive notifications about publications that match their identified interests. To subscribe to NSF Update, go to the NSF Website, scroll halfway down the page, and click on the yellow circle icon with a white envelope inside of it on the right-hand side of the page.

Where can a proposer find guidance on proposal preparation?
NSF’s proposal preparation and submission guidelines – Part I of the Proposal & Award Policies & Procedures Guide (PAPPG) and the NSF Grants.gov Application Guide -- provide guidance for the preparation and submission of proposals to NSF, whether by the NSF FastLane System or Grants.gov. Some NSF programs have program solicitations that modify the general provisions of these Guides, and, in such cases, the guidelines provided in the solicitation must be followed. For those connected with institutions of higher education, the college or university’s Office of Sponsored Programs is a good place to start gathering information.

Where can a proposer find guidance on administration of an NSF award?
Part II of the Proposal & Award Policies & Procedures Guide (PAPPG) provides information regarding the NSF award cycle from issuance and administration of an award through closeout. See the Research Terms and Conditions included in the Award Notice for additional information. For those connected with institutions of higher education, the college or university’s Office of Sponsored Programs is a good place to start gathering information.

Are there presentations and other materials available to help me with proposal preparation and award administration?
The Policy Office in the Division of Institution & Award Support (DIAS) frequently posts presentations from recent events such as the NSF Grants Conference. Presentations are available at: http://nsf.gov/bfa/dias/policy/outreach.jsp#present.

Where can a proposer obtain copies of the NSF Grants.gov Application Guide?
M

Margin and Spacing Requirements

What are the proposal margin and spacing requirements that need to be followed when developing an NSF proposal?

The proposal must be clear, readily legible and conform to the requirements contained in PAPPG Chapter II.B.2.

The typefaces that may be used are identified below:

◆ Arial, Courier New, or Palatino Linotype at a font size of 10 points or larger
◆ Times New Roman at a font size of 11 points or larger
◆ Computer Modern family of fonts at a font size of 11 points or larger

In addition to the typefaces listed above, Macintosh users also may use Helvetica and Palatino typefaces.

A font size of less than 10 points may be used for mathematical formulas or equations, figure, table or diagram captions and when using a Symbol font to insert Greek letters or special characters.

The PAPPG guidelines establish the minimum type size requirements; however, PIs are advised that readability is of paramount importance and should take precedence in selection of an appropriate font for use in the proposal. Small type size makes it difficult for reviewers to read the proposal; consequently, the use of small type not in compliance with the above guidelines may be grounds for NSF to return the proposal without review.

If a proposer uses a prescribed typeface and font size, will their proposal comply with formatting requirements?

It is the responsibility of the proposing organization to thoroughly review each proposal prior to submission. Use of a particular typeface and font size are simply two of the required formatting elements. A proposer should also ensure that there are no more than six lines of text within a vertical space of one inch and that margins, in all directions, are at least an inch. Formatting requirements are described in PAPPG Chapter II.B.

Mentoring (see Postdoctoral Researcher Mentoring Plan)

Merit Review Criteria

Where can a proposer find information related to NSF’s merit review criteria?

All NSF proposals are evaluated through use of two National Science Board approved merit review criteria. Some program solicitations, however, employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed in PAPPG Chapter III.A. Further information about the review process can be found on the NSF Merit Review Website.
New Awardees

An organization is preparing a grant proposal for submission to NSF but does not have a negotiated indirect cost rate. Can the organization submit a grant proposal without a negotiated indirect cost rate, and if so, what indirect cost rate should be used in the grant proposal budget?

In accordance with 2 CFR § 200.414(f), a proposer that has never received a negotiated indirect cost rate, may elect to charge a de minimis rate of 10% of modified total direct costs (MTDC). No supporting documentation is required for proposed rates of 10% MTDC or less.

Domestic proposing organizations that do not have a current negotiated indirect cost rate agreement with a cognizant Federal agency, and who are requesting more than a de minimis 10% recovery of modified total direct costs should prepare an indirect cost proposal based on expenditures for its most recently ended fiscal year. Based on information provided in the indirect cost proposal, NSF may negotiate an award-specific rate to be used only on the award currently being considered for funding. The contents and financial data included in indirect cost proposals vary according to the make-up of the proposing organization. Instructions for preparing an indirect cost rate proposal can be found on the NSF website.

Additional Information on indirect costs is provided in 2 CFR 200 by type of awardee organization:
◆ Institutions of Higher Education
◆ Non-profit Organizations
◆ State and Local Governments

For Profit Organizations should consult the Federal Acquisition Regulation (FAR).

There are a number of other references from both NSF and other Federal Agencies that potential awardee organizations can use to assist in the preparation of an indirect cost rate proposal:

https://www.nsf.gov/bfa/dias/caar/indirect.jsp
https://rates.psc.gov/
http://www2.ed.gov/about/offices/list/ocfo/intro.html

While there are some differences between agencies these can provide an explanation of what indirect costs are and sample calculations.

Foreign organizations that do not have a current US Federally negotiated indirect cost rate(s) are limited to a de minimis indirect cost rate recovery of 10% of modified total direct costs. (Reference PAPPG Chapter II.C.2.g(viii)).

What if an organization has never received NSF funding?

An in-depth review of the organization’s accounting, management and financial practices must be undertaken and certification completed prior to finalizing a
pending award. The Division of Grants and Agreements (DGA) or the Division of Acquisition and Cooperative Support (DACS) will send the requisite forms and the listing of information which needs to be completed and returned, upon notification from programs that an award is imminent for a new performer organization. By examining the documents, DGA and DACS, along with the Division of Institution and Award Support (DIAS), will be able to determine if the grantee organization is capable of directly receiving NSF funds and thereby is eligible to be a recipient of an NSF award.

Potential awardee organizations should be prepared to demonstrate and document that they have an acceptable accounting system (project cost accounting system) adequate to manage cost reimbursable awards. This should include adequate internal controls and segregation of duties. The organization also should be prepared to document that they are financially viable so there is a low risk that NSF funds would be used to meet other organizational expenses not related to the NSF award, and that the organization will remain in business over the term of the NSF award. Lastly, there are requirements in the Uniform Guidance for documented or written policies and procedures that awardee organizations must have in place prior to award.

These include, but are not limited to, the following sections of the Uniform Guidance:

- §200.202 Financial Management
- §200.305 Payment
- §200.318 General Procurement Standards
- §200.333 Retention Requirements for Records
- §200.430 Compensation for Personal Services

Potential awardee organizations should be aware that NSF funding is discretionary and that proposals which have passed peer or other review and have been recommended for funding (scientifically and technically meritorious) can be declined for administrative and financial considerations.

Where can a new proposer find information on the types of documents required to be completed and submitted to NSF in order for NSF to conduct the necessary administrative and financial reviews of the organization?

The “Prospective New Awardee Guide” includes information on: Administration and Management Information; Accounting System Requirements and Auditing Information; and Payments to Organizations with Awards. This information will assist an organization in preparing documents which the NSF requires to conduct administrative and financial reviews of an organization. The guide also serves as a means of highlighting the accountability requirements associated with Federal awards.

See also 2 CFR Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards.

**Nondiscrimination Certification**

Where can I find the complete text of the Nondiscrimination Certification?
See PAPPG Exhibit II-6 for the full text of the Nondiscrimination Certification. These obligations also apply to subrecipients and contractors under the award.

**Notification of Proposal Receipt**

*How will a proposer know whether NSF has received his/her proposal?*

Once the proposal is submitted, PIs can access the number assigned to the proposal via the “Submitted Proposals” list in the FastLane Proposal Preparation module. If a proposal number is not reflected in the FastLane System, contact the FastLane Help Desk at (800) 673-6188, or (703) 292-8142 or by e-mail to fastlane@nsf.gov.

When the proposal is assigned to an NSF program, the cognizant program information is available through the FastLane “Proposal Status Inquiry” function for PIs and through the “Recent Proposals” report for Sponsored Projects Offices. This information is also available through the Research.gov “Grants Application Status” for both PIs and SPOs. Communications about the proposal should be addressed to the cognizant NSF Program Officer with reference to the proposal number. Proposers are strongly encouraged to use FastLane or Research.gov to verify the status of their submission to NSF. (Reference PAPPG Chapter I.G.5).

**Outreach**

*Where can a proposer find information about NSF outreach opportunities?*

In addition to visits by NSF Program Officials and Grants Officers, NSF conducts two grants conferences per calendar year. These grants conferences are held in the spring and fall each year and are announced on the NSF Events Calendar, and on the DIAS/Policy Office website.

These conferences cover topics such as: proposal preparation; merit review; award administration; electronic initiatives; new programs and cross-disciplinary initiatives; and future directions and strategies for the Foundation. NSF representatives also participate in educational and professional development seminars, webcasts, meetings and workshops, which focus on current issues and developments, frequently with such organizations as the National Council of University Research Administrators (NCURA) and the Society of Research Administrators International (SRA). See the DIAS/Policy Office website for additional information.

NSF also focuses outreach for different organization types and has coordinated or is planning workshops for Tribal Colleges and Universities, Historically Black Colleges and Universities (HBCUs), Hispanic Serving Institutions (HSIs) and Minority Serving Institutions (MSIs). For further information about these and other opportunities, contact the DIAS/Policy Office at: policy@nsf.gov.

*Will the NSF Update or Updates to the Proposal & Award Policies & Procedures Guide (PAPPG) presentations be made available?*

Yes. Please see the Recent Presentations section of the DIAS/Policy Office website.
P

Person-Months (for “2 month rule” information, see Senior Personnel)

What is the definition of “person-months”?
The term “person-months” refers to the effort (amount of time) that PI(s), faculty and other senior personnel will devote to a specific project. The effort is based on the organization’s regular academic-year, summer or calendar-year. For example, if the regular schedule is 10 months and 20% effort will be devoted to the project, a total of 2 months should be listed in the academic or calendar-year block (10 months x 20% = 2 months). (Reference PAPPG Chapter II.C.2.g(i)).

How do I calculate the person-months per year committed to the project for completion of the current and pending support section of the proposal?
An individual serving as PI, co-PI, or other senior personnel should multiply the percentage of effort associated with the project by the number of months of his/her appointment (i.e. 10% of a 9 month AY appointment equals .9 person months; 10% of a 12 month calendar appointment equals 1.2 months). Organizations may have internal policies and procedures that relate specifically to the type of appointment under which an individual is employed. PIs, co-PIs, or other senior personnel should, therefore, confirm with their Sponsored Projects Office that this simplified methodology is consistent with organizational policy.

Points of Contact

Who should a proposer contact when seeking guidance on proposal preparation?
Proposers should contact the office with responsibility for submitting the proposal on behalf of the organization. The Sponsored Projects Office, or equivalent, should be the first point of contact. For general policy-related questions regarding proposal preparation, the DIAS/Policy Office may be contacted on (703) 292 8243 or by e-mail to policy@nsf.gov. When responding to a specific program announcement/solicitation, contact the applicable Program Office. The Division of Grants and Agreements or the Division of Acquisition and Cooperative Support should be contacted regarding questions related to award or administration of an award (e.g., terms and conditions of an award or special award conditions).

Post Award Considerations

Where can a grantee find information related to post award administration?
Part II of the Proposal & Award Policies & Procedures Guide (PAPPG) provides information that follows the NSF award cycle from issuance and administration of an award through closeout. The guide is available electronically via the NSF website. Information on post award administration also can be found by accessing the applicable award conditions on the NSF website.
Postdoctoral Researcher Mentoring Plan

Where can I find more information about NSF’s requirement for a postdoctoral researcher mentoring plan?

Each proposal that requests funding to support postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals. Please be advised that if required, FastLane will not permit submission of a proposal that is missing a Postdoctoral Researcher Mentoring Plan. In situations where a postdoctoral researcher is listed in Section A of the NSF Budget, and is functioning in a Senior Project personnel capacity (i.e., responsible for the scientific or technical direction of the project), a mentoring plan is not required.

More information about this requirement can be found in PAPPG Chapter II.C.2.j.

After my proposal was submitted, I discovered that my postdoctoral mentoring plan needs to be corrected. FastLane is not allowing me to do a Proposal File Update to make the correction. What should I do?

If a proposer discovers that a postdoctoral mentoring plan needs to be corrected, the proposal must be withdrawn and resubmitted prior to the deadline. The postdoctoral mentoring plan cannot be corrected through the Proposal File Update module.

I would like to add a postdoctoral researcher after the award has been made. Do I need to notify NSF or request approval?

If your original proposal did not include a mentoring plan, then you must send the cognizant NSF Program Officer the requisite mentoring plan, as described in PAPPG Chapter II.C.2.j. If you are requesting supplemental funding to support the postdoctoral researcher, the guidance in PAPPG Chapter VI.E.4.f should be followed. In either case, the PI must report on the mentoring activities provided to the individual in the annual and final project reports.

Primary Place of Performance Zip Code Field

What is the Primary Place of Performance?

The Primary Place of Performance is the location at which the research is actually being conducted. Many projects are performed at a location other than the Awardee Organization. As a result, NSF requires applicants to list a Primary Place of Performance for each proposal (PAPPG Chapter II.C.2.a).

Do I have to enter an address for the Primary Place of Performance if it’s the same as the address for the Awardee Organization?

Yes. Proposers may select to make the Primary Place of Performance name the same as the Awardee Organization name; however, they must re-enter the full address in the Primary Place of Performance address fields.
Why is it necessary to enter a 9-digit zip code for the Primary Place of Performance?
A 9-digit zip code is required for consistency with the requirements of the Federal Funding Accountability and Transparency Act (FFATA). The 9-digit zip code is validated against the U.S. Postal Service’s (USPS) database, which ensures that the location can be accurately identified and aligns with the correct Congressional district.

Do I need to enter a dash (“-“) in my 9-digit zip code?
No, do not enter a dash. Enter only the digits of the zip code.

How do I enter a foreign address for the Primary Place of Performance?
Enter the street address in the Street Address field, and then select the appropriate country. Zip code and state are not applicable for non-US addresses, therefore, those fields should be left blank.

I received an error message “a valid zip code is required” when entering a zip code for the Primary Place of Performance. How do I correct it?
If this error message appears, a proposer must enter the correct 9-digit zip code for the Primary Place of Performance in order to submit the proposal. The 9-digit zip code for the Primary Place of Performance can be found through the USPS website (http://usps.com) by selecting “Look Up a Zip Code” under the “Quick Tools” menu on the homepage and entering the street address for the performance location.

Why won’t FastLane recognize my organization’s 9-digit zip code?
Some organizations assign unique 9-digit zip code combinations within the organization, which are not registered with the USPS. To verify that the correct USPS-recognized 9-digit zip code for an organization is being used, visit the USPS website at http://usps.com, select “Look Up a Zip Code” under the “Quick Tools” menu on the homepage, and enter the street address for the performance location.

Why is FastLane only allowing me to enter 8 of the 9 digits of my zip code?
Verify that only digits are being entered for the zip code. Do not enter a dash. If only digits are being entered and issues continue to occur, contact the FastLane Helpdesk (fastlane@nsf.gov or 1-800-673-6188, 7AM-9PM EST Monday – Friday except Federal holidays).

Prior Approval Requirements

What types of post-award actions require prior approval from NSF and which can be submitted via FastLane?
All NSF prior approval requirements can be found in PAPPG Chapter VII and Exhibit VII-1. While most notifications and requests should be submitted in Research.gov, a few functions still remain in FastLane. A complete listing of notifications and requests, including where they should be submitted, is located on the Research.gov website.
**Program Announcements and Solicitations**

*Where can a proposer obtain copies of program announcements and solicitations?*

Program announcements and solicitations are available electronically on the NSF website and on individual Directorates’ webpages.

*If there is a conflict between the PAPPG and a program solicitation, which document should be followed?*

Instructions in an NSF program solicitation can modify general guidance in the PAPPG. Proposal preparation guidance contained in program solicitations takes precedence over instructions in the PAPPG and should, therefore, be followed closely. The cognizant program office should be consulted with questions regarding compliance with specific programmatic requirements contained in a program solicitation. (Reference PAPPG Chapter I.C.4).

**Project Outcomes Report for the General Public**

*How does the Project Outcomes report differ from the Annual and Final project reports?*

Annual and final project reports provide NSF Program Officers and administrative offices with information on the progress of supported projects and the way these funds are used. Annual, final and interim project reports must be submitted via Research.gov.

The Project Outcomes report is a brief summary (200-800 words), prepared specifically for the public, of the nature and outcomes of the project, and is not reviewed or approved by NSF Program Officers. The Project Outcomes report is submitted in Research.gov. Additional information is available on the Project Reports page of Research.gov.

*What should be included in a Project Outcomes report?*

PAPPG Chapter VII.D.3 describes the required contents of a Project Outcomes report.

*For a collaborative project, who should submit a Project Outcomes Report?*

For a collaborative project where a single award is made to one lead organization (which administers subawards to other organizations), the PI for the lead organization is responsible for submitting the Project Outcomes Report. For a collaborative project where a separate award is made to each organization in the collaborative, the PI for each separate award is responsible for submitting a Project Outcomes Report.

**Proposal File Updates**

*Can files associated with a previously submitted proposal be replaced and if so, what procedure should be followed?*

It is the responsibility of the proposing organization to thoroughly review each proposal prior to submission. On occasion, however, a problem is identified with a
portion of the proposal after the proposal has been submitted electronically to NSF.

The FastLane Proposal File Update Module allows the organization to request the replacement of files or revision of other Proposal Attributes, associated with a previously submitted proposal. PAPPG Chapter III.C contains the procedures to be followed for proposal file updates.

The Proposal File Update module, however, may not be used for submission of revised budgets. All budgetary revisions must be submitted through use of the FastLane Revised Proposal Budget Module. The postdoctoral mentoring plan also cannot be corrected through the Proposal File Update module. If a proposer discovers that a postdoctoral mentoring plan needs to be corrected, the proposal must be withdrawn and resubmitted prior to the deadline.

**Proposal Not Accepted**

*What does “proposal not accepted” mean?*

Proposal not accepted is defined as FastLane will not permit submission of the proposal because a required component of the proposal is missing, not in compliance with NSF proposal preparation instructions, or the deadline has passed. FastLane will not permit submission of any proposal that fails an automated compliance check resulting in an error. A complete listing of automated proposal compliance checks performed by the system is available on the NSF website. More information is available in PAPPG Chapter IV.B.

**Proposal Preparation**

*Is there a salary cap for proposals submitted to NSF?*

There is no salary cap for proposals submitted to NSF. Salaries, however, are to be based on the individual faculty member’s regular compensation for the continuous period which, under the policy of the organization concerned, constitutes the basis of his/her salary. Except as provided in PAPPG Chapter X.B.3 “Intra-University (IHE) Consulting,” charges to Federal grants, irrespective of the basis of computation, will not exceed the proportionate share of the base salary for that period.

*Are there specific line spacing requirements that must be used for preparation of a proposal?*

While line spacing (single-spaced, double-spaced, etc.) is at the discretion of the proposer, established page limits must be followed and there also must be no more than 6 lines of type within a vertical space of one inch. (Reference PAPPG Chapter II.B.2).

*Are there any specific page numbering requirements which should be used in preparation of a proposal?*

Proposers are advised that FastLane does not automatically paginate a proposal. Each section of the proposal that is uploaded as a file must be individually paginated before upload to FastLane. (Reference PAPPG Chapter II.B.1).

*May Uniform Resource Locators (URLs) be included within the Project Description?* What
about in other sections of the proposal?
PIs are advised that the project description must be self-contained and are cautioned that URLs (Internet addresses) that provide information related to the proposal must not be used because 1) the information could circumvent page limitations, 2) the reviewers are under no obligation to view the sites and 3) the sites could be altered or abolished between the time of submission and the time of review. Inclusion of URLs in other sections of the proposal is not prohibited by the PAPPG, however, PIs should be advised that reviewers are under no obligation to view the site(s).

What are the guidelines concerning collaborative proposals?
The guidelines relevant to collaborative proposals can be found in PAPPG Chapter II.D.3. A collaborative proposal is one in which investigators from two or more organizations wish to collaborate on a unified research project. Collaborative proposals may be submitted to NSF in one of two methods: as a single proposal, in which a single award is being requested (with subawards administered by the lead organization); or by simultaneous submission of proposals from different organizations, with each organization requesting a separate award. All components of the collaborative proposal must meet any established deadline, and, failure to do so may result in the entire collaborative proposal being returned without review.

What information should be included in the “References Cited” section of the proposal?
Each reference must include the names of all authors (in the same sequence in which they appear in the publication), the article and journal title, book title, volume number, page numbers and year of publication. If the document is available electronically, the website address also should be identified. Proposers must be especially careful to follow accepted scholarly practices in providing citations for source materials relied upon when preparing any section of the proposal. If there are no references cited, a statement to that effect should be included in this section of the proposal and uploaded into FastLane. (Reference PAPPG Chapter II.C.2.e).

What is the NSF policy on submission of appendices?
All information necessary for the review of a proposal should be contained in Sections a through j of the proposal. Appendices may not be included unless a deviation has been authorized. PAPPG Chapter II.A contains information on deviations.

If the project will be performed at a location other than the awardee organization, how should that be reflected in the proposal?

If the project will be performed at the awardee organization, the designated box on the Cover Sheet should be checked. If the project, however, will be performed at a location other than the awardee, the following information (where applicable) should be provided:
◆ Organization Name (identify the organization name of the primary site where the work will be performed, if different than the awardee);
◆ Street;
City;
State;
Country; and
9-digit Zip Code.

For further information, see the PAPPG Chapter II.C.2.a(1).

Proposal Submission

What forms do I need to complete for an NSF proposal?
All proposal forms and data requirements for submission of a proposal to NSF are available in Grants.gov or the NSF FastLane system. All sections of the proposal listed in PAPPG Chapter II.C.2 are required parts of the proposal, and must be included with the proposal. Failure to submit the required sections may result in the proposal not being accepted or being returned without review. Detailed information about proposal preparation and submission is available from the Grants.gov and FastLane websites.

Grants for Rapid Response Research (RAPID)

What is a RAPID proposal and where can I find information about submitting this type of proposal?
A RAPID type of proposal is used for proposals having a severe urgency with regard to availability of, or access to data, facilities or specialized equipment, including quick-response research on natural or anthropogenic disasters and similar unanticipated events. PI(s) must contact the NSF Program Officer(s) whose expertise is most germane to the proposal topic before submitting a RAPID proposal. This will facilitate determining whether the proposed work is appropriate for RAPID funding.

More information about the RAPID type of proposal can be found in PAPPG Chapter II.E.1.

Receipt Dates

What happens if a deadline date falls on a weekend or Federal holiday?
If the deadline date falls on a weekend, it will be extended to the following Monday; if the date falls on a Federal holiday, it will be extended to the following business day. (Reference PAPPG Chapter I.F).

What is the difference between target dates, deadline dates and submission windows?
The following types of due dates are utilized by NSF:
◆ Target dates: dates after which proposals will still be accepted, although they may miss a particular panel or committee meeting.
Deadline dates: dates after which proposals will not be accepted for review by NSF. The deadline date will be waived only in extenuating circumstances. Such a deviation only may be authorized in accordance with PAPPG Chapter II.A or in the circumstances outlined in Chapter I.F.

Submission windows: designated periods of time during which proposals will be accepted for review by NSF. For purposes of NSF, the end date of a submission window converts to, and follows the same policies as, a deadline date.

These target dates, deadlines and submission windows are published in specific program descriptions, program announcements and solicitations that can be obtained through the NSF website. Proposals must be received by 5 p.m. submitter’s local time on the established deadline date. (Reference PAPPG Chapter I.F).

If a proposer needs to request extension of a deadline due to a disaster (hurricane, flood, etc.), what process should be followed?

In the event of a natural or anthropogenic disaster that interferes with an organization’s ability to meet a proposal submission deadline, proposers should contact the cognizant NSF Program Officer in the Division/Office to which they intend to submit their proposal and request authorization to submit a “late proposal.” Such contact should be via e-mail (or telephone, if e-mail is unavailable). Where possible, such requests should be submitted in advance of the proposal deadline. Proposers should then follow the written or verbal guidance provided by the cognizant NSF Program Officer. Further information can be found in PAPPG Chapter I.F.

How do I submit a proposal after the deadline date if an extension has been granted due to a natural or anthropogenic disaster?

When an exception to the deadline date has been granted, proposers must check the “Special Exception to the Deadline Date Policy” box on the NSF Cover Sheet in FastLane. This will indicate to the system that NSF approval has been obtained. A statement identifying the nature of the event that impacted the ability to submit the proposal on time should be uploaded under “Nature of Natural of Anthropogenic event” in the Single Copy Document section in FastLane. If available, written approval from the cognizant NSF Program Officer also should be uploaded under “Additional Single Copy Documents” in the Single Copy Document section in FastLane. (Reference PAPPG Chapter I.F).

Reconsideration

What is the process for requesting reconsideration of an NSF funding decision?

A PI whose proposal for NSF support has been declined generally will receive information and an explanation of the reason(s) for declination along with copies of the reviews considered in making the decision.

If the explanation provided does not satisfy the PI, he/she may request that the cognizant NSF Assistant Director or Office Head reconsider the action to determine whether the proposal received a fair and reasonable review, both substantively and
procedurally. Consult PAPPG Chapter IV.D for additional information on the NSF reconsideration process, including the categories of actions that are subject to the NSF reconsideration policy.

References Cited

Will a proposal be returned if a website address is not included in a reference citation?
The NSF guidelines on References Cited are available in PAPPG Chapter II.C.2.e.

If the proposer has a website address readily available, that information should be included in the citation. It is not NSF’s intent, however, to place an undue burden on proposers to search for the URL of every referenced publication. Therefore, inclusion of a website address is optional.

Renewal Awards

Can funds be transferred from the old grant to the new grant in the case of renewal awards?
No, in the case of a renewal award, funds cannot be transferred from the old grant to the new grant. It may, however, be necessary to transfer allowable costs from the old grant to the new grant where appropriate justification exists, e.g., a cost was erroneously charged to the old grant, rather than the new grant. Grantees are reminded that any costs transferred to the new grant must be allocable, allowable and reasonable, in accordance with 2 CFR § 200, Subpart E – Cost Principles, and must be documented in accordance with institutional policies and procedures.

Renewal Proposals

What guidelines are important to know when submitting a renewal proposal?
A traditional renewal application competes with all other applications and must be developed as fully as though the applicant is applying for the first time. In preparing a renewal proposal, proposers should assume that reviewers will not have access to previously submitted versions of the proposal. In addition, the National Science Board strongly endorses the principle that all expiring awards are subject to recompetition. See PAPPG Chapter V for more information on renewal proposals and a link to the NSB resolution.

Grants for Research Advanced by Interdisciplinary Science and Engineering (RAISE)

What is a RAISE proposal and where can I find information about submitting this type of proposal?
A RAISE type of proposal may be used to support bold, interdisciplinary projects whose:

◆ Scientific advances lie in great part outside the scope of a single program or discipline, such that substantial funding support from more than one program or discipline is necessary.
◆ Lines of research promise transformational advances.
◆ Prospective discoveries reside at the interfaces of disciplinary boundaries that may not be recognized through traditional review or co-review.

To receive funding as a RAISE-appropriate project, all three criteria must be met. RAISE is not intended to be used for projects that can be accommodated within other types of proposals or that continue well established practices. Prospective PI(s) must receive approval to submit a proposal from at least two NSF Program Officers, in intellectually distinct programs, whose expertise is most germane to the proposal topics.

More information about the RAISE type of proposal can be found in PAPPG Chapter II.E.3.

**Research Performance Progress Report (RPPR)**

*What is the Research Performance Progress Report?*

The Research Performance Progress Report is the result of a Government-wide effort to create greater consistency in the administration of Federal research awards by streamlining and standardizing reporting formats. The RPPR is used by agencies that support research and research-related activities for use in submission of progress reports.

NSF has developed the RPPR as a service within Research.gov. PIs and co-PIs use Research.gov to meet all NSF project reporting requirements, including submission of annual, final, interim and Project Outcomes Reports.

*Where can I find more information about the RPPR?*

More information may be found on the Project Reports page of Research.gov.

**Responsible Conduct of Research (RCR)**

*Where can a proposer find more information about NSF’s RCR policy?*

Information about NSF’s RCR policy, including links to important documents, is available on the DIAS/Policy Office webpage.

**Resubmissions**

*Can a proposer resubmit a previously declined proposal?*

A declined proposal may be resubmitted, but only after it has undergone substantial revision. Resubmissions that have not clearly taken into account the major comments or concerns resulting from the prior NSF review may be returned without review. NSF will treat the revised proposal as a new proposal, subject to the standard review procedures. (Reference PAPPG Chapter IV.E).

**Returns**

*For what reasons does NSF return a proposal without review?*
The various reasons why NSF may return a proposal without review are listed in PAPPG Chapter IV.B.

**Reviewer**

*How can I volunteer to be a reviewer for NSF?*

In order to become an NSF reviewer, the individual should identify the program(s) that most closely fit their expertise and send an email to the responsible NSF Program Officer(s). Additional information on how to become a reviewer can be found on the NSF website.

**Senior Personnel**

*How is the term “senior personnel” defined?*

The term “senior personnel” includes:

1. (co) Principal Investigator/Project Director (PI/PD) -- the individual(s) designated by the proposer, and approved by NSF, who will be responsible for the scientific or technical direction of the project. NSF does not infer any distinction in scientific stature among multiple PIs, whether referred to as PI or co-PI. If more than one, the first one listed will serve as the contact PI, with whom all communications between NSF program officials and the project relating to the scientific, technical and budgetary aspects of the project should take place. The PI and any identified co-PIs, however, will be jointly responsible for submission of the requisite project reports.

2. Faculty Associate (faculty member) (or equivalent) -- an individual other than the Principal Investigator(s) considered by the performing institution to be a member of its faculty (or equivalent) or who holds an appointment as a faculty member at another institution, and who will participate in the project being supported. (Reference PAPPG Exhibit II-7).

*Does the “2 month” salary rule apply to all senior personnel or only to faculty on academic appointments?*

Yes, the salary policy contained in PAPPG Chapter II.C.2.g.(i) does apply to all senior personnel listed on the NSF budget, not just faculty on academic appointments. The policy does, however, allow for flexibility to request more than two months of salary per year, when applicable. If proposers request more than two months, the needed salary support should be put on the proposal budget and will need to be very well justified in the budget justification. If more than 2 months is approved by NSF, it will be included on the award budget.

*Must grantees request prior NSF approval if making a change post-award to the amount originally budgeted for senior personnel salary?*

NSF has not changed the terms and conditions or any of our post-award prior
approval requirements (See PAPPG Exhibit VII-1). Therefore, under normal rebudgeting authority, a grantee can internally approve an increase in person months devoted to the project after an award is made, even if doing so results in salary support for senior personnel exceeding the 2 month salary rule. No prior approval from NSF is necessary. The caveat is if the change would cause the objectives or scope of the project to change, then the grantee would have to submit an approval request via Research.gov. Since salary can amount to a large part of the budget, there may very well be a scope change with addition of salary, especially if, for example, the PI decided not to hire a graduate student in order to have enough money to cover the salary increase.

Is it possible to remove the PI or other senior personnel from the proposal budget in FastLane?

For consistency with the NSF cost sharing policy, if person months will be requested for senior personnel, a corresponding salary amount must be entered on the budget. If no person months and no salary are being requested for senior personnel, they should be removed from section A of the budget. Their name(s) will remain on the Cover Sheet and the individual(s) role on the project should be described in the Facilities, Equipment and other Resources section of the proposal. See PAPPG Chapter II.C.2.i for additional information.

If PIs can be taken off the budget in FastLane, does this mean that there is no minimum effort requirement for PIs on NSF-sponsored projects?

The PAPPG coverage reminds recipients that they remain subject to the provisions of OMB M-01-06, “Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs,” regarding requirements for committing and tracking “some level” of faculty (or senior researcher) effort as part of the organized research base.

Special Considerations

Where can a proposer find information on conflicts of interest (the investigator financial disclosure policy)? Does NSF provide a written sample of an organizational conflicts of interest policy? Who should a proposer contact if there are questions?

The PAPPG Chapter IX.A provides information on NSF’s conflicts of interest policy. NSF does not provide written samples of such policies. Questions regarding the NSF conflicts of interest policy should be directed to the Office of the General Counsel on (703) 292 8060.

Are there any special requirements for proposals which involve the use of human subjects?

Projects involving research with human subjects must ensure that subjects are protected from research risks in conformance with the relevant Federal policy known as the Common Rule (Federal Policy for the Protection of Human Subjects, 45 CFR 690). All projects involving human subjects must either (1) have approval from the organization’s Institutional Review Board (IRB) before issuance of an NSF award.
or, (2) must affirm that the IRB has declared the research exempt from IRB review, in accordance with the applicable subsection, as established in section 101(b) of the Common Rule.

For projects lacking definite plans for the use of human subjects, their data or their specimens, pursuant to 45 CFR 690.118, NSF can accept a determination notice that establishes a limited time period under which the PI may conduct preliminary or conceptual work that does not involve human subjects. (Reference PAPPG Chapter II D.5).

**Special Programs**

*Does NSF fund projects for targeted or special programs?*

NSF sponsors many funding programs for special purposes. Examples include Doctoral Dissertation Research Improvement Grants and Research Experiences for Undergraduates. Information about these and other programs can be found on the NSF website.

**Subawards**

*What documentation is needed for subawards?*

The basic items are a clear description of the work to be performed, the basis for selection of the subawardee (except for collaborative/joint arrangements) and a separate budget and budget justification for each subaward. (Reference PAPPG Chapter II.C.2.g(vi)(e)).

**Submission Windows**

*I’m familiar with deadlines and target dates, but what is the definition of a submission window?*

Submission windows are designated periods of time during which proposals will be accepted for review by NSF. It is NSF’s policy that the end date of a submission window converts to, and is subject to, the same policies as a deadline date. (Reference PAPPG Chapter I.F).

Target dates, deadlines and submission windows are published in specific program descriptions, program announcements and solicitations that can be obtained from NSF at pubs@nsf.gov or electronically through the NSF website.

**Supplements**

*How do I apply for supplemental funding?*

In unusual circumstances, small amounts of supplemental funding and up to six months of additional support may be requested to assure adequate completion of the original scope of work. The grantee must submit a request for supplemental funding at least two months before funds are needed.

Requests for supplemental funding must be initiated in the FastLane system
by using the “Supplemental Funding Request” function. Grantees should contact the cognizant NSF Program Officer prior to submitting a request for supplemental funding. (Reference PAPPG Chapter VI.E.4).

**System for Award Management (SAM)**

*Does a proposer have to be registered in SAM?*

Each proposer must be registered in the SAM database prior to submission of the proposal. Subawardees named in the proposal, however, do not need to be registered in SAM. SAM is the primary registrant database for the US Government. SAM collects, validates, stores and disseminates data in support of agency assistance and acquisition missions, including Federal agency grant and contract awards. This SAM registration must be maintained with current information at all times during which the organization has an active award or a proposal under consideration by NSF. Failure to comply with the SAM registration requirement prior to proposal submission may impact the processing of the proposal. To register in SAM, go to https://www.sam.gov. Proposers are advised that it takes approximately three-to-five business days to complete the registration process.

**Technology Expenses**

*Can technology devices such as Smartphones, iPhones, iPads, etc. be charged directly to an NSF award?*

A computing device is considered a supply if the acquisition cost is less than the lesser of the capitalization level established by the proposer or $5,000, regardless of the length of its useful life. As such, the cost of computing devices are allowable, so long as the devices are essential and allocable, but not solely dedicated to the performance of the NSF project. (Reference PAPPG Chapter II.C.2.g(vi)(a) and 2 CFR § 200.453).

**Transfer of the Award**

*What procedure should be followed if a PI plans to leave an organization during the course of an active award?*

If a PI plans to leave an organization during the course of an award, the organization has the prerogative to nominate a replacement PI, request that the award be terminated, or transfer the award (via NSF) to the PI’s new organization. Replacement PIs are subject to NSF approval. In those cases where a particular PI’s participation is integral to a given project and the PI’s original and new organizations agree, an award transfer request shall be submitted via the Notification and Request module in the FastLane system.

See PAPPG Chapter VII.B.2.f for additional information on award transfers.
Travel

I will be flying to a location that does not have a City Pair fare with my starting destination, but I will change planes in a city that does have a City Pair fare with my final destination. Am I required to fly an American carrier for the part of the trip that has a City Pair fare?

No. The requirement is only that the grantee determines if there is a City Pair fare between the starting airport and the final destination airport. If there is no city pair between the starting airport and the final destination, the traveler could fly the entire way on a foreign flag air carrier or part of the way on a U.S. flag air carrier and part of the way on a foreign flag air carrier.

Can I charge temporary dependent care costs to my NSF grant?

Temporary dependent care costs are only allowable on a Federal award if the charging of these costs is consistent with the organization’s documented travel policy for all organizational travel. The other conditions in 2 CFR § 200.474(c)(1) must also be met.

Are visa fees allowable as a direct cost on NSF grants?

NSF’s position on the allowability of direct charging visa costs is consistent with 2 CFR § 200.463(d). This section specifically makes the distinction between short-term, travel visa costs, which may be directly charged to a grant if they meet the criteria outlined in section 200.463(d), and longer-term immigration visas, which may not.

Tuition Remission

What is NSF’s policy on treatment of tuition remission?

Tuition remission is generally treated as part of an organization’s fringe benefit rate or as a direct cost. NSF’s policy is that colleges and universities should budget tuition remission consistent with its negotiated indirect cost rate agreement. If tuition remission is budgeted as a direct cost, it should be listed in the “Other” category of the NSF budget under “Other Direct Costs.”

Types of Submissions

What types of submissions may be required under NSF program solicitations?

NSF utilizes three types of submissions – Letters of Intent, Preliminary proposals and Full proposals. A program solicitation can require any of these types of submissions.

More information on these types of submissions and the circumstances under which they are used can be found in the PAPPG Chapter I.D.

V

Vertebrate Animals

What is NSF’s policy on the use of vertebrate animals in research?
For proposals involving the use of vertebrate animals, sufficient information must be provided within the 15-page project description to enable reviewers to evaluate the choice of species, number of animals to be used and any necessary exposure of animals to discomfort, pain, or injury.

Consistent with the requirements of the Animal Welfare Act [7 USC 2131 et seq] and the regulations promulgated thereunder by the Secretary of Agriculture [9 CFR, 1.1-4.11], NSF requires that proposed projects involving use of any vertebrate animal for research or education be approved by the submitting organization’s Institutional Animal Care and Use Committee (IACUC) before an award can be made. For this approval to be accepted by NSF, the organization must have a current Public Health Service (PHS) Approved Assurance. (Reference PAPPG Chapter II.D.4 and Chapter XI.B.3).

W

Withdrawal of a Proposal

What is the procedure for the withdrawal of a proposal?

A proposal may be withdrawn at any time before a funding recommendation is made by the cognizant NSF Program Officer. Proposals must be electronically withdrawn via the FastLane Electronic Proposal Withdrawal System. This module in FastLane automates the proposal withdrawal process and provides a mechanism that will help organizations to more effectively manage their proposal portfolio, as well as to help eliminate the submission of duplicate proposals to NSF. Further information regarding proposal withdrawal procedures can be found in PAPPG Chapter IV.A.
1330.4 Implementation of Final Research Performance Progress Reports (Final RPPR)
National Institutes of Health

Notice Number: NOT-OD-17-022
National Institutes of Health

Key Dates
Release Date: November 23, 2016

Related Announcements
NOT-OD-17-037
NOT-OD-15-111
NOT-OD-15-014
NOT-OD-14-092
NOT-OD-14-084
NOT-OD-14-079
NOT-OD-14-026
NOT-OD-13-113
NOT-OD-13-035
NOT-OD-13-061
NOT-OD-12-083

Purpose
The National Institutes of Health intends to replace the Final Progress Report (FPR) with the Final Research Performance Progress Report (Final RPPR) through a new eRA Commons module effective January 2017.

Background
NIH implemented the interim RPPR in 2012, based on a policy memorandum from the Office of Management and Budget and Office of Science and Technology Policy (OSTP) to the heads of executive departments and agencies establishing the uniform RPPR for use by agencies supporting research and research-related activities. The RPPR replaced previous interim performance reporting formats used by NIH and other agencies.

In order to keep its promise, the Research Business Models (RBM), an Interagency Working Group of the Social, Behavioral & Economic Research Subcommittee of the Committee on Science (CoS), charged NSF and NIH to serve as the co-chairs of an interagency workgroup tasked with developing a standard format for use in reporting final progress on Federally-funded research projects and research-related activities, taking into consideration the lessons learned from implementation of the interim RPPR. This interagency workgroup completed its task and on November 16, 2016, published a Federal Register notice announcing the updated standardized
RPPR to be used for final performance progress reporting.

**NIH Implementation**

For NIH, the Final Research Performance Progress Report (F-RPPR) will replace the Final Progress Report (FPR) for closeout effective January 1, 2017. On or after that date, NIH will no longer accept FPRs. Generally, the format will be the same as the current interim/annual RPPR, making it easier for recipients to navigate through the F-RPPR based on familiarity with the existing format of the annual RPPR.

However, a significant change with implementation of the F-RPPR, is that in order to maximize public transparency, NIH will not maintain the current Type 2 policy which in accordance with NIHGPS Chapter 8.6.2 states that “whether funded or not” the progress report contained in the Type 2 application may serve in lieu of a separate final progress report. It is important to note that the discontinuance of this longstanding policy aligns NIH’s final performance reporting requirement with the requirements imposed by other Federal research awarding agencies thus reducing the administrative burden associated with a unique NIH reporting requirement.

Therefore, as a standard policy, NIH will request that organizations submit an “Interim-RPPR” while their renewal application (Type 2) is under consideration. In the event that the Type 2 is funded, NIH will treat the Interim-RPPR as the annual performance report for the final year of the previous competitive segment. If the Type 2 is not funded, the Interim-RPPR will be treated by NIH staff as the institution’s Final-RPPR.

Also, in accordance with NIH’s implementation of the F-RPPR, recipients will be required to adhere to the new requirement to report on Project Outcomes. This section will be made publicly available, thus allowing recipients the opportunity to provide the general public with a concise summary of the cumulative outcome or findings of the project (analogous to the Project Summary/Abstract section of the competing application).

As mentioned, NIH is aligning its reporting requirement with other Federal research agencies and therefore will not be making any changes to the deadline for submitting the final report- i.e., the Final RPPR or Interim-RPPR must be submitted via eRA Commons no later than 120 calendar days from the period of performance end date. If a recipient fails to comply with this reporting requirement, NIH may take one or more enforcement actions, such as a decision not to make a non-competing continuation award, consistent with NIHGPS Chapter 8.5.2. NIH also plans to maintain the business rule in the RPPR module enabling institutional signing officials (SOs), at their discretion, to delegate submission of the Final RPPR or Interim-RPPR to the Program Director/Principal Investigator (PD/PI).

Note: Implementation of the Final RPPR for Small Business Innovation and Research (SBIR) and Small Business Technology Transfer (STTR) grants will occur approximately 2 months after implementation for all other NIH grants due to unique final reporting requirements under the Small Business Administration’s SBIR/STTR Policy Directive.

FAQs and additional information pertaining to NIH’s implementation of the F-
RPPR will be available on the NIH RPPR website.

**Inquiries**

Please direct all inquiries to:

Division of Grants Policy  
Office of Policy for Extramural Research Administration  
Office of Extramural Research  
grantspolicy@od.nih.gov
Recent FAQs on the NIH Research Performance Progress Reports
National Institutes of Health

I. Final RPPR

Why is NIH implementing the Final Research Performance Progress Report (RPPR)? (01/06/2017)
The Research Business Models (RBM), an Interagency Working Group of the Social, Behavioral & Economic Research Subcommittee of the Committee on Science (CoS), charged NSF and NIH to serve as the co-chairs of an interagency workgroup tasked with developing a standard format for use in reporting final progress on Federally-funded research projects and research-related activities.

Are NIH grantees required to use the Final RPPR? (01/06/2017)
Yes. If a recipient fails to comply with this reporting requirement, NIH may take one or more enforcement actions, such as a decision not to make a non-competing continuation award, consistent with NIHGPS Chapter 8.5.2. Note: Implementation of the Final RPPR for Small Business Innovation and Research (SBIR) and Small Business Technology Transfer (STTR) grants will occur approximately 2 months after implementation for all other NIH grants due to unique final reporting requirements under the Small Business Administration’s SBIR/STTR Policy Directive.

When is the Final RPPR due? (01/06/2017)
The Final RPPR must be submitted via eRA Commons no later than 120 calendar days from the period of performance end date.

Can I still submit the Final Progress Report (FPR) using the old format? (01/06/2017)
If you have a final progress report due, and you wish to use the old FPR format of an uploaded document, you must submit the FPR before January 1, 2017. NIH will no longer accept any of the old format FPRs on or after January 1, 2017.

Are there any differences in the format of the Final RPPR? (01/06/2017)
The format of the Final RPPR is very similar to that of the annual RPPR. The notable differences being the Final RPPR does not have sections F (Changes), and H (Budget). Likewise, the following items do not require responses: B.1.a, B.6, D.2, G.10, G.11, and G.12.

The Final RPPR does have a new section: Section I (Outcomes) https://grants.nih.gov/images/Final-RPPR-Project_Outcomes.png

Will the information reported under Project Outcomes be made public? (01/06/2017)
Yes. The information submitted in this section will be accessible to the general public via NIH’s Research Portfolio On-line Reporting Tools (RePORT). Thus, PD/PI’s are encouraged to ensure the narrative is understandable to a lay person audience.
The report form itself includes the following instruction:
Provide a concise summary of the outcomes or findings of the award (no more than 8,000 characters) that:

◆ is written for the general public in in clear, concise, and comprehensible language;
◆ is suitable for dissemination to the general public, as the information may be available electronically;
◆ does not include proprietary, confidential information or trade secrets; and
includes up to six images (images are optional)

J. Interim RPPR

Our group is submitting a renewal application (R01) in March 2017. Due to the new policy, I understand that we are to complete an “Interim RPPR” for this application. Does that mean that we do NOT include a progress report section in the 12-page Research Strategy section of the application? (01/06/2017)

You would still provide a brief progress report in the Research Strategy section of the application. Peer reviewers will still need that context when reading/rating the overall research strategy for the proposed renewal period.

Are there any differences in the format of the Interim RPPR? (01/06/2017)
The format of the Interim RPPR is very similar to that of the annual RPPR. The notable differences being the Interim RPPR does not have sections F (Changes), and H (Budget). Likewise, the following items do not require responses: B.1.a, B.6, D.2, G.10, G.11, and G.12.

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◆ does not include proprietary, confidential information or trade secrets; and
includes up to six images (images are optional)

If my Type 2 is not selected for funding will I have to submit another Interim RPPR? (01/09/2017)
No. If the Type 2 is not selected for funding, the Interim RPPR will be treated by NIH staff as the institution’s Final RPPR.
### Legislative Actions to Reduce Regulatory Burden Matrix

#### Council on Governmental Relations

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<tr>
<td>Research Policy Board</td>
<td>Established by the Director of OMB. 10 or fewer federal members (OIRA, OSTP, HHS, NSF and others that support or regulate research). 9-12 representatives of academic or other non-profit research institutions or organizations with relevant expertise. Appointed through a formal process including nomination by members of the research community. The process would be established by the Secretary (in consultation with the Federal membership). This is likely in error, as in previous iterations the RPB was established by the HHS Secretary due to HELP jurisdiction, now the OMB Director. The board is charged with coordinating and improving regulations and policies; discussing policy and regulatory gaps and challenges; and ongoing assessment of regulatory burden. Expert subcommittees can be formed as needed. Not explicitly tasked with addressing prospective regulations and policies. Report to Congress and GAO evaluation. Sunsets 9/30/20.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Interagency Working Group on Research Regulations</td>
<td>Not addressed.</td>
<td>To be established by OMB in coordination with OSTP. Charged with reviewing existing regulations and making recommendations for eliminating, streamlining or improving regulations and processes with the goal of reducing burden on researchers and IHEs. Directed to consult with stakeholders, an improvement over the existing research business models (interagency) working group. Requires a report to congressional committees annually for the first four years.</td>
<td>Not addressed.</td>
</tr>
<tr>
<td>Subrecipient Monitoring - reduce unnecessary or redundant oversight.</td>
<td>NIH Director directed to reduce administrative burden, including possible exemption where the subrecipient is subject to single audit and use of collaborative grant models or other structures allowing for multiple prime awardees.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
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**Recommendations** - National Academies - amend the UG to clarify applicability to IHEs only for project and performance monitoring. GAO - target higher risk subrecipients.
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<tr>
<td>Micropurchase Threshold - Increase to $10,000 with the opportunity for higher thresholds. <strong>Recommendations</strong>: National Academies. GAO - target higher risk purchases.</td>
<td>Not addressed.</td>
<td>$10,000 or higher threshold as determined by the head of the relevant executive agency and consistent with audit findings, institutional risk assessment, or State law. Applicable only to NSF, NASA and NIST.</td>
<td>$10,000 or higher threshold as determined by the head of the relevant executive agency and consistent with clean audit findings, institutional risk assessment, or State law. Grants, cooperative agreements, and contracts for all federal agencies.</td>
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<tr>
<td>Review Financial Conflict of Interest Policies - harmonizing policies and reducing burden - <strong>Recommendations</strong>: National Academies - Federal-wide policy to be developed by Congress and OSTP; NSB and GAO - evaluation of the 2011 revisions to the PHS COI regulations.</td>
<td>Within two years of enactment. Led by the HHS Secretary. Review to include the minimum threshold for reporting and just-in-time reporting.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
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<tr>
<td>Review Animal Research Regulations - goal of reducing administrative burden. <strong>Recommendations</strong>: National Academies: OSTP to convene - goal of unified federal approach. NSB - engage all regulatory, independent and certification bodies.</td>
<td>Within two years of enactment. NIH, USDA and FDA are charged with identifying and eliminating inconsistent, overlapping or unnecessarily duplicative regulations and policies and improving coordination.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
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<td>Clarify or Affirm Alternatives to Effort Reporting - <strong>Recommendations</strong>: NSB: OMB issue a memo of clarification indicating that the payroll certification method is acceptable to the Federal Government. National Academies: OMB affirm that IHEs may take advantage of the flexibility of the UG for documenting personnel expenses.</td>
<td>Directs the HHS Secretary to clarify applicability of the Uniform Guidance for management and certification systems, including those for documentation of personnel expenses. It would be our understanding that the intent is that the HHS Secretary affirm the flexibility under the UG in documenting personnel expenses.</td>
<td>Not addressed.</td>
<td>Not addressed.</td>
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<tr>
<td>Unified Grant Format - <strong>Recommendations</strong>: National Academies</td>
<td>Not addressed.</td>
<td>Working group to consider a simplified, unified grant format for use by all agencies.</td>
<td>Not addressed.</td>
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<tr>
<td>Simplified Budget Proposals - <strong>Recommendations</strong>: NSB; GAO</td>
<td>Not addressed.</td>
<td>Consideration by interagency WG</td>
<td>Not addressed.</td>
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### Actions

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<td>Create a Centralized Researchers Profile Database - Recommendations - National Academies</td>
<td>Not addressed.</td>
<td>WG to establish a centralized database for biosketches, CVs, licenses, and related documents. Consider incorporating existing databases. To be utilized for all grant proposals “to the extent practicable.”</td>
<td>Not addressed.</td>
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<tr>
<td>Create a Centralized Assurances Repository - Recommendations - National Academies: “similar to the Single Audit Clearinghouse of the FDP.”</td>
<td>Not addressed.</td>
<td>For all assurances required for federal grants.</td>
<td>Not addressed.</td>
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### Impact of Federal Regulatory Freeze on Research Regulations

Council on Governmental Relations

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<tr>
<th>Regulations Affecting Research Institutions Published Since January 2016</th>
<th>Issued</th>
<th>Effective Date</th>
<th>Implications of the Regulatory Freeze</th>
</tr>
</thead>
<tbody>
<tr>
<td>FAR Rule on Basic Safeguarding of Contractor Information Systems</td>
<td>May 16, 2016</td>
<td>June 15, 2016</td>
<td>With an effective date that precedes the regulatory freeze, With an effective date that precedes the regulatory freeze,</td>
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<tr>
<td>Department of Labor Overtime Rule (Defining and Delimiting the Exemptions for Executive, Administrative, Profession</td>
<td>May 18, 2016</td>
<td>December 1, 2016</td>
<td>With an effective date that precedes the regulatory freeze, the 60 day review period would not have been applicable. A federal judge had blocked implementation with an injunction in November in response to a legal challenge and we understand the rule is now subject to the regulatory freeze. We understand the new administration is determining whether it will continue to defend the rule in court.</td>
</tr>
<tr>
<td>Revised Export Control Definitions for the Export Administration Regulations</td>
<td>June 3, 2016</td>
<td>September 1, 2016</td>
<td>With an effective date that precedes the regulatory freeze, this rule is not subject to review and would remain in effect.</td>
</tr>
<tr>
<td>Revised Export Control Definitions for the International Traffic in Arms Regulations - Interim Final Rule</td>
<td>June 3, 2016</td>
<td>September 1, 2016</td>
<td>With an effective date that precedes the regulatory freeze, this rule is not subject to review and would remain in effect.</td>
</tr>
<tr>
<td>NIH Final Policy on the Use of a Single Institutional Review Board for Multi-Site Research</td>
<td>June 21, 2016</td>
<td>September 25, 2017</td>
<td>We don't believe the regulatory freeze would impact NIH policy or that it would impact NIH policy or that it would be subject to legislative efforts to overturn regulations.</td>
</tr>
<tr>
<td>National Archives and Records Administration (NARA) Controlled Unclassified Information Final Rule</td>
<td>September 14, 2016</td>
<td>November 14, 2016</td>
<td>With an effective date that precedes the regulatory freeze, this rule is not subject to review and would remain in effect.</td>
</tr>
<tr>
<td>HHS Clinical Trials Registration and Results Information Submission</td>
<td>September 16, 2016</td>
<td>January 18, 2017</td>
<td>With an effective date that precedes the regulatory freeze, this rule would remain in effect. The House Freedom Caucus has recommended that the Trump administration target this rule for removal/elimination in its first 100 days. It could potentially be overturned by Congress, but it is unlikely to be overturned via the Congressional Review Act and legislation that would allow Congress to overturn several rules at once has only passed the House.</td>
</tr>
<tr>
<td>NIH Policy on the Dissemination of NIH-Funded Clinical Trial Information</td>
<td>September 16, 2016</td>
<td>January 18, 2017</td>
<td>We don't believe the regulatory freeze would impact NIH policy or that it would be subject to legislative efforts to overturn regulations.</td>
</tr>
<tr>
<td>Policy on Good Clinical Practice Training for NIH Awardees Involved in NIH-funded Clinical Trials</td>
<td>September 16, 2016</td>
<td>January 1, 2017</td>
<td>We don't believe the regulatory freeze would impact NIH policy or that it would be subject to legislative efforts to overturn regulations.</td>
</tr>
<tr>
<td>Defense Federal Acquisition Regulation Supplement: Network Penetration Reporting and Contracting for Cloud Services</td>
<td>October 21, 2016</td>
<td>October 21, 2016</td>
<td>With an effective date that precedes the regulatory freeze, this rule is not subject to review and would remain in effect.</td>
</tr>
<tr>
<td>Hazardous Waste Generator Improvements Rule</td>
<td>November 28, 2016</td>
<td>May 30, 2017</td>
<td>For regulations that have been published in the Federal Register but have not taken effect, agencies have been asked to temporarily postpone their effective date for 60 days from the date of the memorandum (Jan. 20). This rule would therefore be subject to review by “a department or agency head appointed or designated by the President after noon on January 20, 2017” or other designee.</td>
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<tr>
<td>Federal Policy for the Protection of Human Subjects (Common Rule)</td>
<td>January 19, 2017</td>
<td>January 19, 2018</td>
<td>The rule will be postponed 60 days pending review by “a department or agency head appointed or designated by the President after noon on January 20, 2017” or other designee. This shouldn’t affect the implementation date and it is not clear where this will lead. COGR has raised concerns with respect to the Common Rule, most recently in a letter to the new administration and meeting with OIRA and agency staff, and it was included in a list of regulations that the House Freedom Caucus recommends Trump target for removal/elimination in his first 100 days in office. Whether the removal of proposed changes to non-identified biospecimens and resulting reduction in proposed costs will make this less of a target for elimination is unknown. The rule could also be overturned by Congress but it is unlikely to be overturned via the Conressional Review Act and legislation that would allow Congress to overturn several rules at once has only passed the House.</td>
</tr>
<tr>
<td>Department of Education’s Final Rule on Open Licensing Requirements for Competitive Grant Programs</td>
<td>January 19, 2017</td>
<td>March 20, 2017</td>
<td>The rule will be postponed 60 days pending review by “a department or agency head appointed or designated by the President after noon on January 20, 2017” or other designee. Per the memorandum from the new administration, “where appropriate and as permitted by applicable law, [agency heads] should consider proposing for notice and comment a rule to delay the effective date for regulations beyond that 60- day period.” COGR is considering whether to request that this rule be rescinded.</td>
</tr>
<tr>
<td>Updates to the Uniform Guidance (including updates to the procurement rule and the micro-purchase threshold)</td>
<td>Pending</td>
<td>Pending</td>
<td>The new administration has asked that agencies not send regulations to the Office of the Federal Register until a department or agency head appointed or designated by the President after noon on January 20, 2017, reviews and approves the regulation and if regulations have been sent, that they immediately be withdrawn. The memorandum also references guidance documents and “covers any agency statement of general applicability and future effect ‘that sets forth a policy on a statutory, regulatory, or technical issue or an interpretation of a statutory or regulatory issue.’ OMB is following this process, which is delaying release of Federal Register updates to the UG, as well as the release of FAQs. The National Defense Authorization Act and the American Competitiveness and Innovation Act (both of which have been signed into law) establish a $10,000 micro-purchase threshold with provisions for higher levels. The Uniform Guidance will need to be updated to reflect the statutes.</td>
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**1330.8 Research Terms and Conditions Appendix A: Prior Approval Matrix, October 1, 2017**

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*Note: The table continues with additional rows and columns, detailing various policies and requirements.*

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<td>200.407(q)</td>
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<td>200.407(u)</td>
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<td>200.407(y)</td>
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</tbody>
</table>

October 2017  
Sponsored Research Administration
| Costs such as incorporation fees, brokers' fees, fees to promoters, organizers or management consultants, attorneys, accountants, or investment counselors, whether or not employees of the non-Federal entity in connection with establishment or reorganization. | 200.455 | Required | Required | Required | Required | Required | Required | Required |
| Participant support costs | 200.407(t) | | | | | | | |
| Transfer of funds into the participant support cost category | 200.456 | Waived | Waived⁴ | Waived | Required⁵ | Waived | Waived | Waived |
| Transfer of funds budgeted for participant support costs to other categories of expenses | 200.368(b)(13) | Required | Required | Required | Waived⁶ | Required | Waived | Waived⁷ |
| Pre-award costs | 200.407(u) | | | | | | | |
| Inclusion of allowable pre-award costs | 200.458 | Waived | Waived | Waived | Waived | Waived | Waived | Waived |
| Incurred project costs 90 calendar days before the Federal awarding agency makes the award | 200.368(b)(11) | Waived | Waived | Required | Waived | Waived | Waived | Waived |
| Incurred project costs more than 80 calendar days pre-award | 200.368(b)(11) | Required | Required | Required | Required | Required | Required | Required |
| Rearrangement and reconstruction costs | 200.407(v) | | | | | | | |
| Direct charge special arrangements and alterations costs incurred specifically for a Federal award | 200.462(a) | Required | Required⁸ | Required⁹ | Waived¹⁰ | Required | Required | Required |
| Selling and marketing costs | 200.407(w) | | | | | | | |
| Costs of selling and marketing any products or services of the non-Federal entity (unless allowed under 200.421 Advertising and public relations) | 200.467 | Required | Required | Required | Required | Required | Required | Required¹¹ |
| Taxes | 200.407(x) | | | | | | | |
| Use of foreign tax reimbursement for approved activities under the Federal award | 200.470(c) | Required | Required | Required | Required | Required | Required | Required |
| Travel costs | 200.407(y) | | | | | | | |
| Inclusion of travel costs for officials covered by 200.444 General costs of government | 200.474(a) | Required | Required | Required | Required | Required | Required | Required |
| Travel costs for dependents for travel of duration of six months or more | 200.474(c)(2) | Required | Required | Required | Required | Required | Required | Required |

¹ Any of the authorities may be over-ridden by a special term or condition of award.
² Except where specified otherwise in this matrix, the terms and conditions of award, or the applicable program solicitation or award notice.
³ This action requires the prior written approval of the cognizant NSF Program Officer.
⁴ Rearrangement and reconstruction costs under $25,000 may be approved by grantees.
⁵ Unless funds are being moved into the "Other" category of participant support.
⁶ Waived, funds added to the amount available for the project.
⁷ Required for the PI and any other individuals specifically named in the Notice of Award.
⁸ Waived, but costs not specifically covered in Subpart F are subject to the NIH Grants Policy Statement (NHGPR).
⁹ Waived, unless change in scope. For the purposes of Kirschstein-National Research Service Award (NRSA) programs, this term does not apply. NIH will continue to use the terms trainees, trainee-related expenses, and trainee travel in accordance with NRSA Regulations. Participant support costs are only allowable when identified in specific Funding Opportunity Announcements (FOAs).
¹⁰ Waived unless change in scope and except when subrecipient is foreign.
¹¹ Waived except when Notice of Award indicates prior approval is required.
¹² Waived unless change in scope.
¹³ Waived for alterations and renovations costing up to $500,000, unless change in scope or rebudgeting into R&A exceeds 25% of budget period total.
¹⁴ See Rearrangement and Reconversion Costs within NIH Grants Policy Statement Chapter 7.9.1.
<table>
<thead>
<tr>
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<th>RTC Overlay</th>
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<th>DOE</th>
<th>NIH</th>
<th>USDA NIFA</th>
<th>DOC</th>
<th>NASA</th>
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<tr>
<td>200.455</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
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</table>

**Participant support costs**

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<th>NIH</th>
<th>USDA NIFA</th>
<th>DOC</th>
<th>NASA</th>
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<tr>
<td>Transfer of funds into the participant support cost category</td>
<td>200.456</td>
<td>Waived</td>
<td>Waived(^3)</td>
<td>Waived</td>
<td>Required(^3)</td>
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<tr>
<td>Transfer of funds budgeted for participant support costs to other categories of expense</td>
<td>200.359(3)(13)(v)</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Waived(^4)</td>
<td>Required</td>
<td>Required</td>
<td>Waived(^5)</td>
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**Pre-award costs**

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</thead>
<tbody>
<tr>
<td>Inclusion of allowable pre-award costs</td>
<td>200.458</td>
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<td>Waived</td>
<td>Waived</td>
<td>Waived</td>
<td>Waived</td>
<td>Waived</td>
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<tr>
<td>Incur project costs 90 calendar days before the Federal awarding agency makes the award</td>
<td>200.309(3)(1)</td>
<td>Waived</td>
<td>Waived</td>
<td>Required</td>
<td>Waived</td>
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<tr>
<td>Incur project costs more than 90 calendar days pre-award</td>
<td>200.309(3)(1)</td>
<td>Required</td>
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**Rearrangement and reconversion costs**

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<th>DOC</th>
<th>NASA</th>
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<tr>
<td>Direct charge special arrangements and alterations costs incurred specifically for a Federal award</td>
<td>200.462(a)</td>
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<td>Required</td>
<td>Required(^6)</td>
<td>Waived(^11)</td>
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**Selling and marketing costs**

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<th>NIH</th>
<th>USDA NIFA</th>
<th>DOC</th>
<th>NASA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs of selling and marketing any products or services of the non-Federal entity (unless allowed under 200.421 Advertising and public relations)</td>
<td>200.467</td>
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**Taxes including Value Added Tax**

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<th>USDA NIFA</th>
<th>DOC</th>
<th>NASA</th>
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<tr>
<td>Use of foreign tax reimbursement for approved activities under the Federal award</td>
<td>200.470(c)</td>
<td>Required</td>
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**Travel costs**

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<th>NIH</th>
<th>USDA NIFA</th>
<th>DOC</th>
<th>NASA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion of travel costs for officials covered by 200.444 General costs of government</td>
<td>200.474(a)</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
<tr>
<td>Travel costs for dependents for travel of duration of six months or more</td>
<td>200.414(c)(2)</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
<td>Required</td>
</tr>
</tbody>
</table>

\(^1\) Any of the authorities may be over-ridden by a special term or condition of award.

\(^2\) Except where specified otherwise in this matrix, the terms and conditions of award, or the applicable program solicitation or award notice.

\(^3\) This action requires the prior written approval of the cognizant NSF Program Officer.

\(^4\) If requested and approved by the Federal awarding agency, the PI may be required to include the costs.

\(^5\) Waived, funds added to the amount available for the project.

\(^6\) Waived, but costs not specifically covered in Subpart F are subject to the NIH Grants Policy Statement (NIHGPS).

\(^7\) Due to the limited availability of funds, as authorized by the Federal awarding agency, the PI may be required to include the costs.

\(^8\) Waived, unless change in scope.

\(^9\) Waived unless change in scope and except when subrecipient is foreign.

\(^10\) Waived except when Notice of Award indicates prior approval is required.

\(^11\) Waived unless change in scope.

\(^12\) Waived for alterations and renovations costing up to $500,000, unless change in scope or rebudgeting into A&R exceeds 25% of budget period total.

\(^13\) See Rearrangement and Reconversion Costs within NIH Grants Policy Statement Chapter 7.9.1.
<table>
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<th>Reference</th>
<th>RTC Overlay</th>
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<th>NIFA</th>
<th>DOC</th>
<th>NASA</th>
</tr>
</thead>
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<tr>
<td>12</td>
<td>Required, participant support costs are only allowable when identified in specific Funding Opportunity Announcements (FOAs).</td>
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<tr>
<td>14</td>
<td>This also is required for any co-PI/co-PD on the project.</td>
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<tr>
<td>15</td>
<td>Only if the total amount of indirect costs charged to the project does not exceed the maximum allowed indirect costs or the institution's negotiated indirect cost rate, whichever is less.</td>
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<tr>
<td>16</td>
<td>Waived except when: 1) subaward(s) would be more than 50% of the total dollars of the award or 2) subaward is to a federal agency. In these situations, prior approval is required.</td>
<td></td>
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<tr>
<td>17</td>
<td>Except when the change is a reduction in the amount of approved cost-sharing/match in which case prior approval is required.</td>
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<tr>
<td>18</td>
<td>If the cost of the equipment is appropriately prorated among the activities to be benefitted.</td>
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<td>19</td>
<td>Department of Commerce (DOC) permits non-Federal entities to own equipment upon acquisition without conditions or without obligation to the sponsor at termination of project. DOC permits trade in equipment to buy replacement equipment.</td>
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<tr>
<td>20</td>
<td>With prior approval, may use to meet cost share requirement.</td>
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<td>21</td>
<td>Applies to PIs and co-Pis.</td>
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<tr>
<td>22</td>
<td>Waived unless results in a change of scope.</td>
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<tr>
<td>23</td>
<td>Waived unless total cost share amount is reduced from what was approved in budget.</td>
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<tr>
<td>24</td>
<td>Waived if the cost of equipment is appropriately prorated among the activities to be benefitted.</td>
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<td>25</td>
<td>Pertains only to items produced under this award in which the Federal share was used for all or part of the development.</td>
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<td>Subaward Requirements</td>
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<tr>
<td><strong>Institutions of Higher Education</strong></td>
<td><strong>Non-Profit Organizations Other than Hospitals</strong></td>
<td><strong>Non-Profit Hospitals</strong></td>
<td><strong>For-Profit Hospitals</strong></td>
<td><strong>State, Local and Indian Tribal Governments</strong></td>
<td><strong>For-Profit Entities other than Hospitals and Foreign Entities</strong></td>
<td><strong>Non-Profit Organizations Identified in Appendix VII to 2 CFR part 190</strong></td>
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<td></td>
</tr>
<tr>
<td>2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements</td>
<td>2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements</td>
<td>2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements</td>
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**Agency Requirements Specified in**

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</thead>
<tbody>
<tr>
<td>The Research General Terms and Conditions and the Agency Specific Requirements.</td>
</tr>
</tbody>
</table>

| USDA/FRS | | 2 CFR part 200, as implemented by 2 CFR part 200, Subpart E, the Research General Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR part 200, as implemented by 2 CFR part 200, Subpart E, the Research General Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR part 200, as implemented by 2 CFR part 200, Subpart E, the Research General Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. |

| DOE | The Research General Terms and Conditions and the Agency Specific Requirements. | The Research General Terms and Conditions and the Agency Specific Requirements. | 2 CFR part 200, as implemented by 2 CFR part 200, Subpart E, the Research General Terms and Conditions, and any applicable Agency Specific Requirements. | The Research General Terms and Conditions and the Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. |

| NASA | The Research General Terms and Conditions and the Agency Specific Requirements. | The Research General Terms and Conditions and the Agency Specific Requirements. | 2 CFR part 200, as implemented by 2 CFR part 200, Subpart E, the Research General Terms and Conditions, and any applicable Agency Specific Requirements. | The Research General Terms and Conditions and the Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. | 2 CFR § 200, Subpart E, the Research Terms and Conditions, and any applicable Agency Specific Requirements. |

**Audit Requirements Specified in**

| 2 CFR § 200, Subpart F | 2 CFR § 200, Subpart F | 2 CFR § 200, Subpart F | Audit requirements of the Federal awarding agency or the prime recipient. | 2 CFR § 200, Subpart F | Audit requirements of the Federal awarding agency or the prime recipient. | 2 CFR § 200, Subpart F |
### 1330.10 Research Terms and Conditions Appendix C National Policy Requirements

**National Policy Requirements Matrix**

This listing of statutory/regulatory/executive requirements is provided for information purposes only, and may not reflect all requirements that are applicable to a specific award.

<table>
<thead>
<tr>
<th>Statutory/Regulatory/and Executive Based Requirements</th>
<th>Used For:</th>
<th>Requirement(s) that should be noted by the recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Policy Requirements Applicable to all research agencies:</td>
<td>Type of Award</td>
<td>Type of Recipient</td>
</tr>
<tr>
<td>a) Nondiscrimination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By signing or accepting funds under the agreement, the recipient agrees that it will comply with applicable provisions of the following national policies prohibiting discrimination:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The following regulations require the recipient to flow down requirements to subrecipients. NSF at 45 CFR Part 611 NASA at 14 CFR Part 1250 DOE at 10 CFR Part 1040 EPA at 40 CFR Parts 7 and 12 USDA at 7 CFR Part 15 DOC at 15 CFR Part 8 HHS at 45 CFR Part 80 &amp; 81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. On the basis of race, color, religion, sex, or national origin, in Executive Order 11246 [3 CFR, 1964-1965 Comp., p. 339], as implemented by Department of Labor regulations at 41 CFR Part 60. EPA at 40 CFR Parts 7 and 12</td>
<td>Grants, cooperative agreements, and other prime awards defined at 40 CFR 60-1.3 as &quot;Federally assisted construction contract.&quot;</td>
<td>All</td>
</tr>
<tr>
<td>41 CFR 60-1.4(b) prescribes a clause that recipients must include in federally assisted, construction awards and subawards [60-1.4(d) allows incorporation by reference]. This requirement also is at: 32 CFR 33.36(l)(3) and at paragraphs 1. of Appendices A to 32 CFR Part 32 and 32 CFR Part 34.</td>
<td></td>
<td></td>
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<tr>
<td>Statutory/Regulatory/and Executive Based Requirements</td>
<td>Used For:</td>
<td>Requirement(s) that should be noted by the recipient</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><strong>National Policy Requirements Applicable to all research agencies:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. On the basis of handicap, in:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. The Architectural Barriers Act of 1968 (42 U.S.C. 4151, et seq.)</td>
<td>Grant or loan</td>
<td>Construction or alteration of buildings or facilities, except those restricted to use only by able-bodied uniformed personnel.</td>
</tr>
<tr>
<td>3. Americans with Disabilities Act 42 USC 12101 et. seq</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>b) Live Organisms</td>
<td></td>
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</tr>
<tr>
<td>By signing or accepting funds under the agreement, the recipient assures that it will comply with applicable provisions of the following national policies concerning live organisms:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. For human subjects:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Statutory/Regulatory/and Executive Based Requirements</td>
<td>Used For:</td>
<td>Requirement(s) that should be noted by the recipient</td>
</tr>
<tr>
<td>------------------------------------------------------</td>
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</tr>
<tr>
<td>National Policy Requirements Applicable to all research agencies:</td>
<td>Type of Award</td>
<td>Type of Recipient</td>
</tr>
<tr>
<td>a. For human subjects, the Common Federal Policy for the Protection of Human Subjects. Codified by the:</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>DOC at 15 CFR Part 27</td>
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<tr>
<td>DHHS at 45 CFR Part 46</td>
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<tr>
<td>NSF at 45 CFR Part 690</td>
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<tr>
<td>NASA at 14 CFR Part 1230 DOE at 10 CFR Part 745</td>
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<tr>
<td>EPA at 40 CFR Parts 26 and 40 USDA at 7 CFR Part 1c</td>
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</tr>
<tr>
<td>b. Human Stem Cell Research</td>
<td>As applicable</td>
<td>All</td>
</tr>
<tr>
<td>In accordance with the President’s Executive Order 13505 of March 9, 2009, and July 30, 2009 Memorandum for the Heads of Executive Departments and Agencies. See NIH Guidelines for Human Stem Cell Research, July 7, 2009. Other regulations that may apply:</td>
<td></td>
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<tr>
<td>HHS Human Subjects Protection Regulation, 45 CFR Pt 46</td>
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<tr>
<td>FDA Regulations governing INDs or IDEs (Title 21 CFR Parts 312 or 812)</td>
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<tr>
<td>FDA IRB &amp; informed consent regulations (Title 21 CFR Parts 50 &amp; 56)</td>
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</tr>
<tr>
<td>Research on Transplantation of Fetal Tissue (PHS Act 489A)</td>
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</tr>
<tr>
<td>c. P.L. 104-191 Health Insurance Portability and Accountability Act (HIPAA)</td>
<td>As applicable</td>
<td>Covered Entities</td>
</tr>
<tr>
<td>45 CFR Part 160 and Subparts A and E of Part 164 Subpart C to be effective 4/20/2005 (Security)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. For animals:</td>
<td>All</td>
<td>All</td>
</tr>
</tbody>
</table>
### Statutory/Regulatory/and Executive Based Requirements

<table>
<thead>
<tr>
<th>National Policy Requirements Applicable to all research agencies:</th>
<th>Type of Award</th>
<th>Type of Recipient</th>
<th>Specific Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Rules on animal acquisition, transport, care, handling, and use in: (i) 9 CFR Parts 1-4, Department of Agriculture rules that implement the Laboratory Animal Welfare Act of 1966 (7 US + A160C. 2131-2156). Public Health Service Agencies must follow requirements in the PHS Policy on Humane Care and Use of Laboratory Animals, which implements PL 99-158, Sec. 495. NASA requirements for animal welfare are set forth at 14 CFR Part 1232 EPA at 40 CFR Part 40. For USDA/CSREES, “In the case of domestic farm animals housed under farm conditions, the institution should adhere to the principles stated in the Guide for the Care and Use of Agricultural Animals in Agriculture and Teaching, Federation of Animal Science Societies, 1999.”</td>
<td>All</td>
<td>All</td>
<td>Research, experimentation, or testing involving the use of animals USDA regulations exempt birds, most rats and mice bred for research, and farm animals used for agricultural research.</td>
</tr>
<tr>
<td>c) Environmental Standards</td>
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</tr>
<tr>
<td>By signing the agreement or accepting funds under this agreement, the recipient assures that it will:</td>
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<tr>
<td>2. Identify to the awarding agency all impact this award may have on:</td>
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</table>
## Statutory/Regulatory/and Executive Based Requirements

<table>
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<th>Type of Recipient</th>
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</thead>
<tbody>
<tr>
<td>a. The quality of the human environment, and provide help the agency may need to comply with the National Environmental Policy Act (NEPA, at 42 U.S.C. 4321, et. seq.) and to prepare Environmental Impact Statements or other required environmental documentation. In such cases, the recipient agrees to take no action that will have an adverse environmental impact (e.g., physical disturbance of a site such as breaking of ground) until the agency provides written notification of compliance with the environmental impact analysis process.</td>
<td>All</td>
<td>All</td>
<td>All actions that may affect the environment</td>
</tr>
<tr>
<td>b. Flood-prone areas, and provide help the agency may need to comply with the National Flood Insurance Act of 1968 and Flood Disaster Protection Act of 1973 (42 U.S.C. 4001, et. seq.), which require flood insurance, when available, for Federally assisted construction or acquisition in flood-prone areas. DOE at 10 CFR Part 1022</td>
<td>All</td>
<td>All</td>
<td>Awards involving construction, land acquisition or development, with some exceptions [see 42 U.S.C. 4001, et. seq.].</td>
</tr>
<tr>
<td>c. Coastal barriers, and provide help the agency may need to comply with the Coastal Barriers Resource Act (16 U.S.C. 3501, et. seq.), concerning preservation of barrier resources. EPA at 40 CFR Part 6</td>
<td>Grants, cooperative agreements, and other “financial assistance” (see 42 U.S.C. 4003).</td>
<td>All</td>
<td>Awards that may affect barriers along the Atlantic and Gulf coasts and Great Lakes’ shores</td>
</tr>
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<td></td>
<td>42 U.S.C. 4012a prohibits awards for acquisition or construction in flood-prone areas (Federal Emergency Management Agency publishes lists of such areas in the Federal Register), unless recipient has required insurance. If action is in a floodplain, Executive Order 11988 [3 CFR, 1977 Comp., p. 117] specifies additional pre-award procedures for Federal agencies. Recipients are to apply requirements to subawards (“financial assistance,” defined at 42 U.S.C. 4003, includes indirect Federal assistance).</td>
</tr>
<tr>
<td>d. All existing or proposed component of the National Wild and Scenic Rivers system, and provide help the agency may need to comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271, et seq.). EPA at 40 CFR Part 6</td>
<td>Grants, cooperative agreements, and other “financial assistance” (see 16 U.S.C. 3502).</td>
<td>All</td>
<td>Awards that may affect existing or proposed element of National Wild and Scenic Rivers system.</td>
</tr>
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<td></td>
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<td></td>
<td>Requirements flow to subawards (16 U.S.C. 3502 includes indirect assistance as “financial assistance”).</td>
</tr>
</tbody>
</table>
### Statutory/Regulatory/and Executive Based Requirements

<table>
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<tr>
<th>National Policy Requirements Applicable to all research agencies:</th>
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<th>Type of Recipient</th>
<th>Specific Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>e. Underground sources of drinking water in areas that have an aquifer that is the sole or principal drinking water source, and provide help the agency may need to comply with the Safe Drinking Water Act (42 U.S.C. 300h-3), EPA at 40 CFR Part 6</td>
<td>All</td>
<td>All</td>
<td>Construction in All area with aquifer that the EPA finds would create public health hazard, if contaminated.</td>
</tr>
<tr>
<td>3. Resource Conservation and Recovery Act 42 USC 6901</td>
<td>All</td>
<td>Awards to states or a political subdivision of a state (which for this purpose includes state and local institutions of higher education or hospitals)</td>
<td>42 U.S.C. 300h-3(e) precludes awards of Federal financial assistance for All project that the EPA administrator determines may contaminate a sole-source aquifer so as to threaten public health</td>
</tr>
</tbody>
</table>

### d) Health & Safety Guidelines

By signing the agreement or accepting funds under this agreement, the recipient assures it will comply with the following requirements:

<table>
<thead>
<tr>
<th>1. Applicable OSHA Standards in Laboratories</th>
<th>All</th>
<th>All</th>
<th>Research involving use of hazardous chemicals or bloodborne pathogens</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Handling and transport of etiologic agents</td>
<td>All</td>
<td>All</td>
<td>Research involving etiologic agents</td>
</tr>
<tr>
<td>3. Biosafety standards in microbiological and biomedical laboratories</td>
<td>All</td>
<td>All</td>
<td>Microbiological and biomedical research</td>
</tr>
<tr>
<td>4. Controlled Substances</td>
<td>All</td>
<td>All</td>
<td>Research involving controlled substances</td>
</tr>
<tr>
<td>5. Disposal of high-level radioactive waste and spent nuclear fuel. Note however, that some States are exempt if they have established separate requirements.</td>
<td>All</td>
<td>All</td>
<td>Research involving radioactive waste and spent nuclear fuel</td>
</tr>
</tbody>
</table>

Drug Enforcement Administration (DEA) registration, inspection and certification

### Statutory/Regulatory/and Executive Based Requirements

<table>
<thead>
<tr>
<th>National Policy Requirements Applicable to all research agencies:</th>
<th>Used For:</th>
<th>Specific Situation</th>
<th>Requirement(s) that should be noted by the recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Investigational New Drug Applications</td>
<td>All</td>
<td>All</td>
<td>All clinical trial investigations of products that are subject to section 505 or 507 of the Federal Food, Drug, and Cosmetic Act or to the licensing provisions of the PHS Act (58 Stat. 632, as amended (42 USC 201, et seq.)</td>
</tr>
<tr>
<td>7. Hotel and Motel Fire Safety Act of 1990 - P.L. 101-39</td>
<td>Conference or meeting support</td>
<td>All</td>
<td>Alterations and Renovations &gt; $500,000</td>
</tr>
<tr>
<td>8. Labor Standards under Federally Assisted Construction: Construction Work Hours and Safety Standards Act</td>
<td>All</td>
<td>All</td>
<td>Alterations and Renovations &gt; $500,000</td>
</tr>
<tr>
<td>9. Text Messaging While Driving - EO 13513</td>
<td>All</td>
<td>All</td>
<td>When performing work for or on behalf of government</td>
</tr>
<tr>
<td>10. Increasing Seat Belt Use in the United States Executive Order 13043, Increasing Seat Belt Use in the United States, dated, April 16, 1997</td>
<td>Grants and Cooperative Agreements</td>
<td>All</td>
<td>In accordance with the Executive Order, &quot;grantees are encouraged to adopt and enforce on-the-job seat belt policies and programs for their employees when operating company-owned, rented, or personally owned vehicles.&quot;</td>
</tr>
</tbody>
</table>

**e) National Security Guidelines**

By signing the agreement or accepting funds under this agreement, the recipient assures it will comply with the following requirements:
### Statutory/Regulatory/and Executive Based Requirements

<table>
<thead>
<tr>
<th>National Policy Requirements Applicable to all research agencies:</th>
<th>Used For:</th>
<th>Requirement(s) that should be noted by the recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of Award</strong></td>
<td><strong>Type of Recipient</strong></td>
<td><strong>Specific Situation</strong></td>
</tr>
<tr>
<td>1. Executive Order 13224, Blocking Property and Prohibiting Transactions with Persons who Commit, Threaten to Commit, or Support Terrorism, dated September 23, 2001. Executive Order 13224 gives the U.S. government a powerful tool to impede terrorist funding and is part of our national commitment to lead the international effort to bring a halt to the evil of terrorist activity. President Bush issued Executive Order 13224 pursuant to the authorities of the International Emergency Economic Powers Act (50 U.S.C. 1701 et seq.), the National Emergencies Act (50 U.S.C. 1601 et seq.), section 5 of the United Nations Participation Act of 1945, as amended (22 U.S.C. 287c) (UNPA), and section 301 of title 3, United States Code.</td>
<td>All</td>
<td>In general terms, the Order provides a means by which to disrupt the financial support network for terrorists and terrorist organizations by authorizing the U.S. government to designate and block the assets of foreign individuals and entities that commit, or pose a significant risk of committing, acts of terrorism. In addition, because of the pervasive-ness and expansiveness of the financial founda-tions of foreign terrorists, the Order authorizes the U.S. government to block the assets of individuals and entities that provide support, services, or assist-ance to, or otherwise associate with, terrorists and terrorist organiza-tions designated under the Order, as well as their subsidiaries, front organizations, agents, and associates.</td>
</tr>
<tr>
<td>2. Select Agents and Toxins P.L. 107-188: Public Health Security &amp; Bioterrorism Preparedness Response Act of 2002, Title II sections 201-231</td>
<td>As applicable</td>
<td>Research with or storage of Select Agents and Toxins Institution must be registered with CDC and or USDA prior to beginning work with agents. Investigator must be licensed prior to beginning work. NIH Term of Award includes notice that registration must be complete before using NIH funds and that no funds may be used for Select Agent Research if certification is denied. USDA inserts a term indicating that the grantee has primary responsibility for complying with Title II of the Public Health Security and Bioterrorism Preparedness and Response Act of 2002, Public Law 107-188, and the regulations promulgated thereunder in 7 CFR Part 331, 9 CFR Part 121, and 42 CFR Part 72. For guidance on a biosecurity plan that includes physical security of facilities and access controls to prevent unauthorized entries see Departmental Manual 9610-1, USDA Security Policies and Procedures for Biosafety Level-3 Facilities (available via <a href="http://www.usda.gov/directives/index.html">http://www.usda.gov/directives/index.html</a>) Other State and Local regulations may apply</td>
</tr>
</tbody>
</table>

**P.L. 107-56 The USA Patriot Act of 2001 Section 175b www.cdc.gov/od/sap**

**Codified by the: HHS at 42 CFR Pt 73 USDA at 7 CFR 331 and 9 CFR 121**

**See also 15 CFR Chapter 7 for Export Administration Regulations (EAR)**

**www.bxa.doc.gov and 49 CFR Pts 171 - 180 for transportation requirements**
<table>
<thead>
<tr>
<th>Statutory/Regulatory/and Executive Based Requirements</th>
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<tbody>
<tr>
<td><strong>National Policy Requirements Applicable to all research agencies:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Executive Order 13526 Classified National Security Information: prescribes a uniform system for classifying, safeguarding, and declassifying national security information, including information relating to defense against transnational terrorism.</td>
<td>All</td>
<td></td>
</tr>
</tbody>
</table>

**f) General/Miscellaneous Requirements**

By signing or accepting funds under the agreement, the recipient agrees that will comply with the following general national policy requirements:

<p>| 1. <strong>CCR Registration - 2 CFR Part 25</strong> | All | Recipient only; does not apply to subrecipients | CCR registration must be renewed annually. |
| 2. <strong>Drug Free Workplace</strong> | All | All | 41 USC 701 et seq. |
| Public Law 100-690, Title V DOC at 15 CFR Part 29 | | | |
| 3. <strong>DUNS number - 2 CFR Part 25</strong> | All | Recipient and 1st tier subrecipient | DUNS number required at time of application |
| 4. <strong>False Claims Act Provisions</strong> | | | |
| a. Civil False Claims Act | All | All | All | 31 USC 2739 |
| b. Criminal False Claims Act 18 USC 287 and 1001 | All | All | All | 18 USC 287 and 1001 |
| c. Program Fraud and Civil Remedies and False Claims Act 31 USC 3801, 45 CFR 79 | All | All | All | 31 USC 3801, 45 CFR 79 |
| 5. <strong>Government-wide Debarment and Suspension (Non-procurement)</strong> | All | All | 42 USC 1870 (a); Sec. 2455, PL 103-355, 108 Stat. 3327 (31 USC 6101 note); EO 12549 (3 CFR, 1986 Comp., p. 189); EO 12689 (3 CFR, 1989 Comp., p. 235) |</p>
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<td><strong>National Policy Requirements Applicable to all research agencies:</strong></td>
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<tr>
<td></td>
<td>Type of Award</td>
<td>Type of Recipient</td>
</tr>
<tr>
<td>6. Lobbying Prohibitions</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>USC 1352, stipulates that (1) No Federal appropriated funds have been paid or will be paid, any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement. (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal grant or cooperative agreement, the undersigned shall complete and submit the SF Form LLL, “Disclosure of Lobbying Activities”, in accordance with its instructions.</td>
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<tr>
<td>7. Metric System</td>
<td>All</td>
<td>All</td>
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<tr>
<td>15 USC 205 a-k and Executive Order 12770</td>
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<tr>
<td>8. Misconduct in Science</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>Policies and responsibilities associated with prevention, detection, and handling of misconduct in science allegations as stipulated in agency implementing regulations:</td>
<td></td>
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</tr>
<tr>
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<td><strong>National Policy Requirements Applicable to all research agencies:</strong></td>
<td>Type of Award</td>
<td>Type of Recipient</td>
</tr>
<tr>
<td>9. National Historic Preservation</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>The recipient agrees to identify to the awarding agency all property listed or eligible for listing on the National Register of Historic Places that will be affected by this award, and to provide all the help the awarding agency may need, with respect to the award. 16 USC 470f EPA at 40 CFR Part 6, Section 204 (b)(4)</td>
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<tr>
<td>10. Paperwork Reduction Act</td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>When data is collected from respondents using a questionnaire or other survey instrument. See, however, M-11-07 dated 12/9/10 entitled, “Facilitating Scientific Research by Streamlining the Paperwork Reduction Act Process.”</td>
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</tr>
<tr>
<td>11. Recipient Integrity and Performance Matters</td>
<td>All</td>
<td>Recipient only. Does not apply to subrecipients</td>
</tr>
<tr>
<td>Reporting of Matters Related to Recipient Integrity and Performance; Appendix XII to 2CFR 200</td>
<td></td>
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</tr>
<tr>
<td>12. Transparency Act - FFATA Public Law 109-282</td>
<td>All</td>
<td>All, including 1st tier subrecipients</td>
</tr>
<tr>
<td></td>
<td>49 USC 40118 See also General Services Administration amendment to the Federal Travel Regulations, Federal Register (Vol. 63, No. 219, 63417-63421)</td>
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</tr>
<tr>
<td>13. U.S. Flag Air Carriers</td>
<td>All</td>
<td>All</td>
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<tr>
<td>49 USC 40118 See also General Services Administration amendment to the Federal Travel Regulations, Federal Register (Vol. 63, No. 219, 63417-63421)</td>
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<tr>
<td>National Policy Requirements Applicable to all research agencies:</td>
<td>Type of Award</td>
<td>Specific Situation</td>
</tr>
<tr>
<td><strong>14. Trafficking in Persons</strong></td>
<td>Grants and Cooperative Agreements and contracts</td>
<td>175.15(b)</td>
</tr>
<tr>
<td>By signing or accepting funds under the agreement, the recipient agrees that it will comply with Trafficking Victims Protection Act of 2000 (22 U.S.C. 7104(g)) as implemented by 2 CFR 175</td>
<td></td>
<td>(b) apply to other than private entities if award includes subrecipient award to a private entity 117.15(b)</td>
</tr>
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<td></td>
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<td>(c) applies to all</td>
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</table>
| | | | 3. You must include the requirements of paragraph a.1 of this award term in any subaward you make to a private entity.
<table>
<thead>
<tr>
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<td></td>
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</tr>
<tr>
<td><strong>15. Whistleblower Protection</strong></td>
<td>Type of Award: All</td>
<td>Specific Situation: All</td>
</tr>
<tr>
<td>Awardees are notified of the applicability of 41 U.S.C. § 4712, as amended by P.L. 112-239, providing protection for</td>
<td>Type of Recipient: All</td>
<td></td>
</tr>
<tr>
<td><strong>16. Use of United States Flag Vessels</strong></td>
<td>Grants, Cooperative Agreements</td>
<td>All</td>
</tr>
<tr>
<td>46 CFR 381</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>17. Patents, Trademarks and Copyrights</strong></td>
<td>Grants and Cooperative Agreements</td>
<td>Awards to non-profits and small businesses</td>
</tr>
<tr>
<td>35 USC 202-204 and 37 CFR 401</td>
<td></td>
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</tr>
<tr>
<td><strong>18. Privacy Act</strong></td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>5 USC 552a</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>19. Pro Children Act</strong></td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>20 USC 7183</td>
<td></td>
<td>All awards performed in facilities where children are served.</td>
</tr>
<tr>
<td><strong>20. Uniform Relocation Assistance and Real Property Acquisition Policies Act</strong></td>
<td>All</td>
<td>All</td>
</tr>
<tr>
<td>42 USC 4601 and 49 CFR 24</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>21. Confidentiality of Patient/Client Records</strong></td>
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<td><strong>22. Constitution Day</strong></td>
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<td><strong>23. Copeland Act</strong></td>
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<td>40 USC 4135</td>
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I. NIH Implementation of the Research General Terms and Conditions

a. The Research General Terms and Conditions apply to all NIH grants and cooperative agreements with the exception of the automatic carryover provision found in 2 CFR § 200.308(d)(3). Automatic carryover authority will be indicated on the Notice of Award (NoA) (See II.d below).

b. NIH Implementation of the Research General Terms and Conditions includes: 1) DHHS codification of 2 CFR §200 in 45 CFR Part 75; 2) conditions on activities and expenditure of funds in statutory requirements, such as those included in appropriations acts detailed at: http://grants.nih.gov/grants/policy/appropriations_info.htm; and 3) the NIH Grants Policy Statement.

c. For certain funding mechanisms, NIH implements streamlined requirements for progress report submission, the Notice of Award (NoA), and financial reporting. Known as the Streamlined Noncompeting Award Process (SNAP), NIH routinely applies SNAP to most Research Project (R-series) awards (except R35s, R41s, and R43s), and Career Development Awards (K-series). NIH grantees are expected to follow the SNAP process for those awards that are issued under the SNAP, as indicated on the NoA. Agency-specific requirements listed below will indicate where differences exist between SNAP and non-SNAP grants. Additional information on SNAP can be found in the NIHGPS, at 8.4.1.2, “Streamlined Noncompeting Award Process”.

II. Prior Approval Requirements Not Included in or Modified from the Research General Terms and Conditions

a. Transfer of funds budgeted for participant support costs to other categories of expense (200.308(c)(1)(v)): Waived, unless change in scope. For the purposes of Kirschstein- NRSA programs, this term does not apply. NIH will continue to use the terms trainees, trainee-related expenses, and trainee travel in accordance with NRSA Regulations. Participant support costs are only allowable when identified in specific FOAs.

b. Subawarding, transferring or contracting out any work under a Federal award (200.308(c)(1)(vi)): NIH prior approval is required for the transfer of a significant part of the research or substantive programmatic effort only when the transfer represents a change of scope unless the transfer is to a foreign entity. If the transfer is to a foreign entity, prior approval must be obtained in order to complete the appropriate administrative assurances.

c. Initiate a one-time extension of the period of performance by up to 12 months (200.308(d)(2)): Recipients are required to notify NIH of their initiation of a one-time no-cost extension. Recipients are encouraged to use the No-Cost Extension Notification feature in the eRA Commons and can submit notifications up to the
last day of the current end date, essentially waiving the 10-day requirement.

d. Carry forward unobligated balances to subsequent periods of performance (200.308(d)(3)): NIH prior approval may be required for carryover of unobligated balances on all P mechanisms except P01s; cooperative agreements (U’s); Institutional National Research Service Awards (T’s); Phase I SBIR & STTR (R43, R41); clinical trials (regardless of mechanism) and awards to individuals. The NIH Notice of Award will state whether prior approval is or is not required for carry over.

e. Subawards based on fixed amounts at any dollar amount, provided the subawards meet the requirements for fixed amount awards in 200.201(200.332): NIH prior approval is required in order for recipients to provide subawards based on fixed amounts (as defined in 2 CFR 200.45) to which the conditions in 2 CFR 200.201 apply.

f. Direct charge the salaries of administrative and clerical staff (200.413(c)(3)): NIH prior approval is not required to rebudget funds to direct charge the salaries of administrative and clerical staff if the following conditions are met: administrative or clerical services are integral to the project or activity; individuals involved can be specifically identified with the project or activity; the costs are not also recovered as indirect costs. The only time a prior approval request would need to be submitted is when additional funds are requested for such a position or the incurrence of such costs constitutes a change of scope.

g. Direct charge special arrangements and alterations costs incurred specifically for a Federal award (200.462(a)): NIH prior approval is required for Alterations and Renovations that exceed $500,000.

III. Allowable Direct Costs Aside from Those in 2 CFR 200, Subpart E

a. The allowability of direct costs not specifically covered by the provisions of 2 CFR 200, Subpart E shall be in accordance with the NIHGPS, 45 CFR Part 75, or the NIH Funding Opportunity Announcement published in the NIH Guide for Grants and Contracts, if more current.

IV. Contact Information

a. Contact Information for Technical Matters

The NIH Scientific Program Official as identified on the Notice of Award is responsible for the scientific monitoring of the research.

b. Contact Information for Administrative Matters

The NIH Grants Management Officers/Specialist as identified on the Notice of Award is the official to be notified when required by the General Terms and Conditions.

c. Contact Information for Intellectual Property Matters

The NIH point of contact for intellectual property matters is:
Division of Extramural Inventions and Technology Resources  
Office of Policy for Extramural Research Administration, NIH  
6705 Rockledge Dr., Rm. 1136, MSC 7980  
Bethesda, MD 20892-7980  
Telephone: 301/435-1986

Inventions are required to be reported using Interagency Edison (located at http://www.iedison.gov/).

V. Agency-Specific Requirements Related to Articles in The Research General Terms And Conditions

Part II Subpart B of the NIHGPS includes additional policy guidance as well as terms and conditions that vary from standard terms and conditions because of the type of grant, grantee, or grant-supported activity. These terms and conditions may apply in addition to or in lieu of those in the Research General Terms and Conditions. Each section of Part II Subpart B of the NIHGPS specifies how the coverage relates to Section II Subpart A of the NIHGPS (11/16 or its successor), and consequently to the Research General Terms and Conditions.

Part II Subpart B includes:
◆ Multiple Program Director/Principal Investigator Applications and Awards
◆ Construction, Modernization, or Major Alteration and Renovation of Research Facilities
◆ Ruth L. Kirschstein National Research Service Awards
◆ Research Career Development Awards
◆ Modular Applications and Awards
◆ Support of Scientific Meetings (Conference Grants)
◆ Consortium Agreements
◆ Grants to Foreign Institutions, International Organizations, and Domestic Grants with Foreign Components
◆ Grants to Federal Institutions and Payments to Federal Employees Under Grants
◆ Grants to For-Profit Organizations
◆ Research Patient Care Costs

The Office of Policy for Extramural Research Administration (OPERA) is responsible for developing and maintaining the NIH GPS. Interim changes to NIH grants policy will be published in the NIH Guide for Grants and Contracts. Each change will be described, including its applicability and effective date.

VI. Revised Budget Requirements

a. While a modified, streamlined, progress report is still a feature of grants awarded under the Streamlined Non-competing Award Process (SNAP) authorities, a streamlined version of the RPPR has replaced the eSNAP module in the
eRA Commons. For all SNAP awards, the progress report is submitted using this streamlined version of the RPPR that does not include detailed budget information.

b. For non-SNAP awards, revised budget information should be submitted according to the instructions in Section H of the RPPR Instruction Guide.

VII. Technical Reporting

NIH requires grantees to report on scientific progress using the Research Performance Progress Report (RPPR) module in eRA Commons. Annual progress reports submitted in any format other than the RPPR will not be processed by the NIH and will require resubmission through the RPPR.

As of January 1, 2017, NIH has replaced the Final Progress Report with the Final RPPR (F-RPPR). Generally, the format will be the same as the annual RPPR, making it easier for recipients to navigate through the F-RPPR based on familiarity with the existing format of the annual RPPR. Effective February 9, 2017, if the recipient organization has submitted a renewal application on or before the date by which an F-RPPR would be required for the current competitive segment, then submission of an “Interim-RPPR” via eRA Commons is now required. Based on this requirement, NIH has discontinued the policy for renewal applications whereby, “whether funded or not,” the progress report contained in the renewal application may serve in lieu of a separate final progress report.

VIII. Financial Reporting

a. Generally, for SNAP awards, a Federal Financial Report (FFR) is required at the end of a competitive segment only. It must be submitted within 120 days after the end of the competitive segment and must report the cumulative support awarded for the entire competitive segment. An FFR must be submitted at this time whether or not a competing continuation award is made.

b. For non-SNAP awards, the FFR is required annually. The report must be submitted for each budget period, no later than 90 days after the end of the calendar quarter in which the budget period ends. The report must also cover any authorized extension in time of the budget period. For non-SNAP awards, the final FFR must be submitted within 120 days after the end of the competitive segment.

c. For grants eligible for automatic carryover, the FFR must specify the amount to be carried over to the next budget period. The notification must be provided under item 12, “Remarks,” on the FFR.

d. If more frequent reporting is required, the NoA will specify both the frequency and due date.

e. FFRs must be submitted electronically to NIH using the FFR system located in the eRA Commons. Questions concerning specific financial matters should be directed to the Government Accounting Branch, 301-451-9210, or visit the Government Accounting web-page at https://ofm.od.nih.gov/Pages/
XI. Incremental Funding Actions

a. SNAP
   1. Instructions for submitting SNAP progress reports are included in the RPPR Instruction Guide.
   2. Career Development Awards that are issued under SNAP are to follow the RPPR instructions for SNAP and the CDA instructions of the RPR at Section 7.1.
   3. NIH will use the quarterly FFR cash transaction data submitted to the Payment Management System (PMS) to monitor the financial aspects of SNAP awards. Final FFR expenditure data is required to be submitted to NIH within 120 days of the end of a competitive segment (see 200.343).

b. Non-SNAP
   1. Instructions for submitting non-SNAP progress reports are included in the RPPR Instruction Guide.
   2. Institutional Research Training Grant, Including Ruth L. Kirschstein National Research Service Awards are to follow the specific training grant instructions of the RPPR at Section 7.4.
   3. A FFR is required to be reported annually to NIH for non-SNAP awards. Final FFR expenditure data is required to be submitted to NIH within 120 days of the end of a competitive segment (see 200.343).
Knowledge Check

AIS editors

The Q&As at §1390.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 1300 has been understood. Note: For the answer key for §1390.1, see §1390.3, which appears on a separate page (page 1390:5) for testing purposes.

Discussion topics at §1390.2 are designed to engender dialogue among staff on general issues of importance in the field.

§1390.1 Q&As

1. The following circular primarily addresses application processing:
   (a) A-21
   (b) A-87
   (c) Both (a) and (b)
   (d) None of the above

2. The circulars are issued by which of the following:
   (a) National Institutes of Health
   (b) National Science Foundation
   (c) Office of Management and Budget
   (d) General Accountability Office

3. Administrative and clerical costs on federal grants and contracts are governed by
   (a) OMB A-110
   (b) OMB A-21
   (c) OMB A-133, Compliance Supplement
   (d) Appendix material to Joy of Cooking

4. Which of the following is NOT a major funding mechanism used in sponsored research:
   (a) Contract
   (b) Gift
   (c) Grant
   (d) Cooperative agreement
5. Put simply, indirect costs on sponsored projects are costs that are
(a) Not easily and readily identified with a particular project
(b) Generally easily identified with a particular project
(c) Both (a) and (b)
(d) Neither (a) nor (b)

6. In determining the level of risk a subrecipient represents, the following factors are often considered EXCEPT
(a) Size of the subaward
(b) Size of the entity and length of time in business
(c) Geographic location of the subrecipient
(d) Past performance of the entity

7. Which of the following best describes a “material finding” under an audit?
(a) An internal control deficiency
(b) Noncompliance with applicable laws, regulations, or agreement terms and conditions of an inconsequential nature
(c) Level of uncertainty or doubt as to allowability or appropriateness
(d) Noncompliance with applicable laws, regulations, or agreement terms and conditions of a substantive nature

8. Cost sharing or matching in connection with a federal grant means that portion of project or program costs
(a) Not borne by the federal sponsor
(b) Not included in the budget
(c) Not available until after the award is closed out
(d) That are always less than $5,000

9. Which of the following would NOT be on the list of compliance items reviewed during an audit:
(a) Auditors will test to make sure that the entity actually spent the money before requesting reimbursement from the government.
(b) Auditors will verify that the science used under the grant meets acceptable community standards as established by peer review committees.
(c) Auditors will test to see if cost sharing commitments were met, the claimed cost sharing was documented, and all the costs were allowable.
(d) Auditors will make sure that the purchasing policies of the entity comply with federal law and then test to see that those policies are followed.
1390.2 **Discussion Topics**

1. It is said that a research administrator should prepare for an audit during the entire award life cycle. What does this mean and how can it be implemented?

2. What role does “judgment” play in determining the validity of expenses charged to federal awards?

3. The regulatory environment surrounding sponsored research has become increasingly complex over the years. Do you agree or disagree with this statement? Why?

4. What is “award monitoring”? Why is it important?

5. Carol Langguth, of the USDA’s National Institute of Food Safety, spoke at the 2009 NCURA Annual Meeting in Washington, D.C. Langguth provided the audience with a heads up on some audit issues identified by her oversight staff, so institutions could be sure to avoid these errors:

   - Drawdowns in excess of expenditures and/or occurring beyond 90 days after grant expiration
   - Improper pooling/co-mingling of funds
   - Insufficient matching
   - Untimely closeout of grants
   - Financial reports don’t reconcile with accounting records and are filed late or not at all
   - Noncompliant time and effort reporting
   - Noncompliant subrecipient monitoring

   Langguth also mentioned some common problems with applications, including the following:

   - Budget: does not match the narrative or all budget items are not explained in the narrative; doesn’t include base salary and work months; proposal is for multiple years, but budget for only one year
   - Costs: meals not justified; auditing and clerical costs not justified
   - Consultants/subcontractors: no justification for excessive pay for consultants/speakers; consultants rate of pay missing; no letter of intent or statement of work for consultants/subcontractors; subcontract duration exceeds award duration
   - Problems with commitments exceeding 100%; effort percentages missing for some projects
   - Human subjects/animal care approval signed by subcontractor’s authorized representative and not that of the awardee

   Do any of these apply to your institution? Before answering, remember to include in your review all applications — not just those going to the USDA. What can
you do to better monitor your practices to avoid these common problems?

6. With the increased scrutiny on transparency and accountability coming from the Obama administration and Congress, what is your institution doing to be sure your practices could pass the so-called “newspaper test” (that is, what if a story about your practices appeared on the front page of your local newspaper — would it portray your institution in a favorable or unfavorable light)?
¶1390.3  **Answer Key**

Following are the correct answers to the questions included at ¶1390.1.

1. (d) None of the above

2. (c) Office of Management and Budget

3. (b) OMB A-21

4. (b) Gift

5. (a) Not easily and readily identified with a particular project

6. (c) Geographic location of the subrecipient

7. (d) Noncompliance with applicable laws, regulations, or agreement terms and conditions of a substantive nature

8. (a) Not borne by the federal sponsor

9. (b) Auditors will verify that the science used under the grant meets acceptable community standards as established by peer review committees.
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¶1501 Introduction
Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter on research compliance addresses a particularly critical topic for research administration.

If the major issues and concerns of research administration in the 21st century had to be summarized in only one word, there is very little doubt that the word would be “compliance.” One needs only to read occasional headlines announcing yet another dramatic case of noncompliance or misconduct in connection with a research program at a college or university to appreciate this.

Stephen Erickson of Boston College and Alice Tangredi-Hannon of Yale University have prepared an excellent overview of the research compliance topic. This chapter is not a catalogue of all of the subjects about which compliance requirements exist. Rather, it is a very thoughtful discussion of what compliance means in the context of sponsored programs and how one might go about developing an effective program of research compliance.

Drawing on sources as diverse as the U. S. Sentencing Guidelines, the results of NIH compliance site visits, and the Council on Governmental Relations (COGR) publication, “Managing Externally Funded Research Programs,” Erickson and Tangredi-Hannon have collected and summarized the essential requirements for an effective research compliance program. They correctly identify the process of assessing compliance as one that is absolutely essential to an effective program. Assessment as a one-time effort will not produce the desired outcomes. Compliance assessment needs to become a regular ongoing activity within the institution. The authors have effectively conveyed the message that it is “all about integrity” and fostering a “culture of compliance.”

Clearly, the federal government is focused on monitoring regulatory and programmatic compliance at colleges and universities. This chapter will continue to respond to the information needs of research administrators over time through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶1505, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶1520), practical tools (at ¶1530), case studies (¶1540), and relevant statistics and survey results (at ¶1560). A “knowledge check” containing Q&As and discussion topics is included at ¶1590.
¶1505 Research Compliance

Stephen Erickson
Director, Research Compliance and Intellectual Property Management
Boston College

Alice Tangredi-Hannon
University Research Compliance Officer
Yale University

This chapter provides an overview of why research compliance is important to an institution and will help guide an institution in developing a research compliance program and/or assessing the continued effectiveness of an existing program. The chapter discusses the importance of top-level institutional commitment and the appointment of an office and/or individual to oversee research compliance. Further, the chapter outlines the process of developing a research compliance program and the importance of conducting ongoing assessments to determine compliance and mitigate risks.

¶1505.1 Why Research Compliance Is Important

For a scientist, integrity embodies above all the individual’s commitment to intellectual honesty and personal responsibility. It is an aspect of moral character and experience. For an institution, it is a commitment to creating an environment that promotes responsible conduct by embracing standards of excellence, trustworthiness, and lawfulness and then assessing whether researchers and administrators perceive that an environment with high levels of integrity have been created.1

Universities in Society

As nonprofit institutions, universities have a public mission. The public depends on university research to be conducted in an objective and honest way. University research may form the basis of public policy. The creation of medical therapies, drugs, and devices depends on the basic and clinical research performed by universities and affiliated hospitals. The development of knowledge through research as well as contributions to the arts are additional ways universities fulfill, in part, their public mission. These are but a few examples of the social context of university research.

It is not enough, however, to simply create knowledge. The public mission requires that academic work must be disseminated through, for example, publications, public performances or presentations, and the licensing of intellectual property. A key element in the appropriate dissemination of knowledge is that the research must be performed ethically and honestly, in keeping with the accepted standards in the given academic

field. Furthermore, the reporting of research results whether to sponsors or via publications must be done in an objective and honest manner.

Just as the conduct and reporting of research must be done in an honest manner, universities have a fiduciary responsibility to manage the funding of research projects appropriately regardless of the source of funding. Any perception that finances are mismanaged calls into question the integrity of the entire research program as well as the institution’s ability to satisfy its fiduciary responsibilities.

The research enterprise, to the greatest extent possible, also must be free of individual or institutional conflicts of interest. As noted by the Association of American Universities, “The partnership between research universities and their principal research sponsors — including the federal government — must be based on the conviction that universities are accountable for the research they perform.” Great care must be given to ensure the transparency of business relationships because even the perception that a conflict exists can damage the public trust.

Preserving Public Trust in Research and Institution’s Fiduciary Role

The public will support science only if it can trust the people and the institutions that conduct research. Major social institutions, including research institutions, are expected to be accountable to the public. Fostering an environment that promotes integrity in the conduct of research is an important part of that accountability.3

Public trust in universities must be held by not just the general population, but also government agencies (at all levels), public and private research sponsors, alumni, donors, and the press. Some of the situations that jeopardize public trust in universities include the following:
(a) Misuse or mismanagement of sponsored funding (This occurs when proposal budgets are artificially inflated, when effort is not reported appropriately, and when funds are spent in conflict with sponsor policies.)
(b) Expenditure of funds in ways contrary to their intended purposes
(c) Instances of research misconduct
(d) Real or perceived conflicts of interest (In the public’s eye, COI can easily lead to a perception, accurate or not, that research results are biased, or that universities are more concerned with private rather than public interests.)

Public support is essential to universities sustaining themselves as viable entities. Public distrust of university research or financial management would strike at the core of university existence. Trust is fragile and can be severely diminished by occurrences of financial mismanagement, poor audit findings, cases of research misconduct, and even the perception that research results are biased due to conflicts of interest.

3 Institute of Medicine and National Research Council, op. cit., p. 16.
Accepting Compliance Requirements

When an institution accepts sponsored funding, it is accepting and agreeing to comply with certain conditions in the areas outlined in Figure 1.

Even when the expectations are not explicitly stated, in order to maintain the integrity of the research and scholarly enterprise, the institution must understand that the topics listed in Figure 1 constitute fundamental aspects of all that an institution of higher education must satisfy as a part of maintaining the public trust.

What does acceptance of compliance requirements mean for an institution? It means the following:

◆ The highest levels of administration understand that compliance is important.

◆ Those responsible for performing the work under sponsored funding are aware of sponsor policies and what it takes to be in compliance.
◆ Universities must have policies and procedures that are consistent with compliance requirements.
◆ Universities need to educate those who are responsible for various aspects of compliance including faculty, administrative staff, and students, as appropriate to a given program. Education needs to include both the external and internal environments, i.e., sponsor requirements as well as university policies and procedures.
◆ Compliance responsibilities must be clearly assigned and understood. The creation of a “roles and responsibilities” document can take many forms, but it is essential. The exercise of creating a written document will assure that duplication of effort is avoided, that everyone understands who is responsible for what, and that all compliance aspects are covered.
◆ Compliance assessment must be an ongoing effort. Depending on institutional culture, compliance assessment needs to cover policy and procedure development, as well as determine whether compliance with sponsor policies and internal policies and procedures is being achieved.

1505.2 Statement of Principles

It is not unusual for an institution to have a mission statement under which it operates. In order to fulfill that mission, principles are also defined and promoted. These principles further the mission and the success of the organization by articulating what the institution considers to be good practices and what its belief systems are. Similarly, when developing a sponsored projects compliance program, the expectations of the program need to be clearly understood by the senior officials promoting the compliance principles and the individuals working with them.

Example

The Trustees of the University of Pennsylvania have promulgated a statement of principles in regard to its sponsored projects compliance program. The following statement of principles articulates the university’s expectation of the community and provides information as to how the community will maintain an ethical and compliant environment: “In order to ensure the public trust in Penn’s considerable research enterprise, we must maintain the highest standards of integrity and expectations of ethical behavior. In maintaining this principle, Penn continues to encourage and develop a highly ethical and compliant environment through education and training. The integrity with which we conduct sponsored programs is a community effort involving faculty, staff and students.”

When adopting or developing a statement of principles, institutions may further define the institution’s goals and include specific activities and/or good practices such as the following:

◆ Voluntarily commit to a culture of the highest ethical standards that encourages and promotes an environment of compliance
◆ Uphold the institution’s commitment to internal and external sponsor policies, regulations, laws, and award terms and conditions
◆ Seriously consider the value of sponsor guidance
◆ Commit to the mantra of “doing the right thing”
◆ Achieve the research goals of the sponsored project (May seem obvious but should be stated so as to never lose perspective.)

1505.3 Risks of Noncompliance

Failure to successfully articulate and carry out an institution’s principles of operation may result in risks relating to noncompliance. The exposures associated with a determination of noncompliance can vary significantly. Depending on the severity of the issue, an institution may experience the following:

◆ Costly fines and/or penalties
  • Penalties under the False Claims Act include treble damages and fines of between $5,000 and $10,000 per false claim
◆ Reduced research funding either as a grantee or subrecipient
◆ Sponsor-imposed special award terms and conditions
◆ Loss of expanded or waiver of authorities
◆ Enhanced sponsor monitoring program
◆ Designation as an “exceptional” or “high-risk” institution
◆ Acquiescence to an Institutional Integrity Agreement
◆ Suspension/debarment from receiving federal funds
◆ Reduction in student enrollment
◆ Reduction in donations
◆ Compromise of the reputation of the following:
  • Principal investigators
  • Research administrators
  • Trustees/governing boards
  • The overall institution
◆ Loss of public trust
◆ Public demand for institutional accountability
Included in Figure 2 are some situations and associated fines that institutions have suffered and that could possibly damage their reputations and public trust.

![Figure 2](image)

**Figure 2**

Noncompliance = Damages

Financial and Reputation

- Johns Hopkins University
  - Effort Reporting Settlement
  - $2.6 million

- New York University Medical Center
  - Inflated Research Grant Costs
  - $15.5 million

- Stanford University
  - Inflated Research Overhead Costs
  - $1.2 million

- Harvard University/BIDMC
  - Questioned Costs Self-Reported
  - $3.25 million

- University of Chicago
  - Research Fraud and Abuse
  - $650,000

- University of Alabama Birmingham
  - Resolve False Billing Allegations
  - $3.4 million

- Public Demand for Improved Control

- Can it happen to your institution?

Note: A similar graphic representation is presented in the NCURA Sponsored Projects Administration II workshop.
1505.4 **Benefits of an Effective Compliance Program**

It should not be assumed that developing a sponsored projects compliance program is an inexpensive endeavor. Nevertheless, to not have a program in place can be very costly as evidenced by the penalties indicated in Figure 2. Avoiding such negative consequences is a reason in and of itself to have a program in place. In addition, an effective compliance program can help to accomplish the following:

- Protect the institution from liability by limiting the exposure of the following:
  - Trustees
  - Senior officers
  - Principal investigators
  - Key business administrators
- Mitigate risk of potential civil and criminal penalties of those considered to be compliant
- Improve overall management of sponsored projects by ensuring good stewardship of funds and thereby building the following:
  - Sponsor confidence
  - Public confidence
- Provide for effective stewardship of institutional resources

1505.5 **Compliance Program Considerations**

In developing a sponsored projects compliance program, institutions have taken into consideration the following:

- Results of the National Institutes of Health (NIH) Office of Policy for Extramural Research Administration (OPERA) compliance site visits
- Elements of the U.S. Sentencing Guidelines
- The November 2005 Department of Health and Human Services (HHS) Office of Inspector General (OIG) draft guidance
- The Council on Governmental Relations (COGR) publication entitled *Managing Externally Funded Research Programs: A Guide to Effective Management Practices*

Each of these is discussed separately below.

**OPERA Compliance Site Visits**

In many cases OPERA’s compliance visits have been a wake-up call to grantees to start the process of self-assessment. The visits revealed core problems and reinforced NIH expectations of its grantees. For some grantees, these visits became the impetus to formalize a compliance program.

What exactly did OPERA discover during these visits? It found the following:

- Inadequate resources
◆ Lack of institutional staff’s understanding of roles and responsibilities
◆ Inadequate staff training and education
◆ Outdated or nonexistent policies and procedures
◆ Inadequate management systems (e.g., effort reporting, financial management)
◆ Perception that internal control systems are not necessary

As a result of these findings, OPERA defined a set of fundamental principles for establishing a sponsored projects compliance program. OPERA’s recommendations to grantees were designed not only to correct the findings cited above but also to provide guidance on how an effective compliance program can be achieved. In presentations regarding the not-for-cause compliance site visits, OPERA describes what was learned, but more importantly what institutions should have in place as part of a sponsored projects compliance program.

As paraphrased from OPERA’s presentation, it recommends the following:
◆ An effective culture of compliance must be established from the “top” and be an institutional expectation.
◆ A mechanism for concerns to be heard should be established.
◆ Personnel need to understand their responsibilities.
◆ Training and education are critical.
◆ Good communication throughout the institution is essential.
◆ Adequate systems must be in place to support an effective compliance program.
◆ It is important to take a proactive stand regarding compliance before, rather than after, a catastrophe occurs.5

U.S. Sentencing Guidelines

The U.S. Sentencing Guidelines, including in particular the amendment to Chapter 8 (§8B2.1, Effective Compliance and Ethics Program), are not required to be adopted by educational institutions. However, some institutions have embraced the basic tenets of the Guidelines and have built compliance programs using the tenets as their core principles. The purpose of the amendment to Chapter 8 is to assist organizations in mitigating civil or criminal penalties by possibly lowering the so-called “culpability scores” that a defendant would receive if convicted. The lowering of such “culpability scores” is accomplished in part by putting into place an effective compliance and ethics program.

The Guidelines contain seven steps viewed as the minimum necessary for an effective program of compliance and ethics. As paraphrased from the Guidelines, they include the following:

(1) The organization should establish standards and procedures to prevent and detect criminal conduct.

(2) The organization’s governing authority shall be knowledgeable about the content and operation of the compliance and ethics program and shall exercise reasonable oversight with respect to the implementation and effectiveness of the compliance and ethics program.

   (a) High-level personnel of the organization shall ensure that the organization has an effective compliance and ethics program. Specific individual(s) within high-level personnel shall be assigned overall responsibility for the compliance and ethics program.

   (b) Specific individual(s) within the organization shall be delegated day-to-day operational responsibility for the compliance and ethics program. Individual(s) with operational responsibility shall report periodically to high-level personnel and, as appropriate, to the governing authority, or an appropriate subgroup of the governing authority, on the effectiveness of the compliance and ethics program. To carry out such operational responsibility, such individual(s) shall be given adequate resources, appropriate authority, and direct access to the governing authority or an appropriate subgroup of the governing authority.

(3) The organization shall use reasonable efforts not to include within the substantial authority personnel of the organization any individual whom the organization knew, or should have known through the exercise of due diligence, has engaged in illegal activities or other conduct inconsistent with an effective compliance and ethics program.

(4) The organization shall take reasonable steps to communicate periodically and in a practical manner its standards and procedures, and other aspects of the compliance and ethics program, to the individuals referred to in (2)(b) by conducting effective training programs and otherwise disseminating information appropriate to such individuals’ respective roles and responsibilities.

(5) The individuals referred to in (2)(a) are the members of the governing authority, high-level personnel, substantial authority personnel, the organization’s employees, and, as appropriate, the organization’s agents.

(6) The organization shall take reasonable steps to

   • ensure that the organization’s compliance and ethics program is followed, including monitoring and auditing to detect criminal conduct;

   • evaluate periodically the effectiveness of the organization’s compliance and ethics program; and

   • have and publicize a system, which may include mechanisms that allow for anonymity or confidentiality, whereby the organization’s employees and agents may report or seek guidance regarding potential or actual criminal conduct without fear of retaliation.
(7) The organization’s compliance and ethics program shall be promoted and enforced consistently throughout the organization through (a) appropriate incentives to perform in accordance with the compliance and ethics program; and (b) appropriate disciplinary measures for engaging in criminal conduct and for failing to take reasonable steps to prevent or detect criminal conduct.

After criminal conduct has been detected, the organization shall take reasonable steps to respond appropriately to the criminal conduct and to prevent further similar criminal conduct, including making any necessary modifications to the organization’s compliance and ethics program.6

OIG Draft Guidance on Compliance Programs
In November 2005, the Department of Health and Human Services (HHS) Office of Inspector General (OIG) published proposed guidance in the Federal Register for comment. In June 2006, HHS OIG announced that it would not be going forward with issuing final guidance. Instead, the Research Business Models Subcommittee of the National Science and Technology Council will be developing broader, voluntary compliance guidance. The proposed guidance is still valuable, however, in that it “sets forth its [OIG’s] general views on the value and fundamental principles of compliance programs for colleges and universities and other recipients of PHS awards for biomedical and behavioral research and the specific elements that these award recipients should consider when developing and implementing an effective compliance program.”7

Reminder
Simply stated, institutions should consider
◆ establishing compliance standards and procedures;
◆ assigning high-level personnel to oversee compliance;
◆ ensuring that discretionary authority is not delegated to individuals with a propensity for illegal activities (e.g., through background screening);
◆ effectively communicating to employees about compliance standards and procedures (e.g., training);
◆ taking reasonable steps to ensure compliance with standards through monitoring, auditing, and reporting systems (e.g., a compliance hot line);
◆ adequately and consistently enforcing standards, including, as appropriate, discipline for offenders; and
◆ responding to infractions and taking steps to prevent subsequent re-occurrences.


Specifically, the proposed HHS OIG guidance contains the following eight recommended elements of a successful compliance program:

1. Implementing written policies and procedures
2. Designating a compliance officer and compliance committee
3. Conducting effective training and education
4. Developing effective lines of communication
5. Conducting internal monitoring and auditing
6. Enforcing standards through well-publicized disciplinary guidelines
7. Responding promptly to detected problems and undertaking corrective action
8. Defining roles and responsibilities and assigning oversight responsibility

Council on Governmental Relation's Recommended Practices

A publication by the Council on Governmental Relations (COGR), *Managing Externally Funded Research Programs: A Guide to Effective Management Practices*, provides “practices” valuable in the development of a compliance program that will assist in mitigating risk. COGR identifies eight practices that constitute an effective institutional compliance program:

1. The institution has written policies and practices covering the programmatic conduct and the administrative and financial management of sponsored programs.
2. The institution has clearly established lines of responsibility, i.e., a delineation of the roles and responsibilities, for all sponsored projects and administrative personnel involved in the conduct and management of sponsored programs.
3. The institutional leadership is knowledgeable and supportive of an effective compliance program.
4. An education program is in place for both externally mandated and institutionally determined compliance requirements.
5. The institution has a program in place that creates a climate that encourages compliance including appropriate incentives and protections for employees who report noncompliance.
6. The institution has systems designed to detect noncompliance with federal, state, and local regulations.
7. When instances of noncompliance are determined, the institution implements corrective actions to minimize the re-occurrence of similar problems.
8. The institution does ongoing risk assessment as an essential component of the design, implementation, and modification of its compliance program.8

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It is not surprising that the sources discussed echo a similar theme, because they are based primarily on the U.S. Sentencing Guidelines. When viewed from another perspective, one can see that they contain common elements because they are an articulation of common sense prerequisites for a compliance program.

**Codes of Conduct**

Many universities have in place compliance programs that incorporate the components outlined in the U.S. Sentencing Guidelines as well as the components of the HHS OIG proposed guidance. In the case of some institutions, their trustees or regents have required that a statement or code of conduct be developed to prevent and deter criminal conduct.

Unfortunately, a statement or code of conduct alone does not establish an environment of compliance. Rather, having an organizational culture that encourages ethical conduct and embraces an institution’s ethical value system is critical. Leadership in this regard must come from the “top,” i.e., governing board, president, and senior academic and administrative officials.

Institutions starting to design a compliance program that does not have in place either a “code of conduct” or “standards of ethical conduct” may want to engage representatives from the institutional community in its design. Faculty members in particular may take great interest in the development of such a code and may at times question its necessity. Senior officials need to be prepared to address the importance of such standards. The lack of expressed standards does not imply bad behavior, but the existence of such standards helps to articulate to the community the expectations under which the institution operates.

For many state institutions, a code or standards of conduct may in fact exist due to state statute. Although required by state law, the existence of a code or standards of conduct may not always be known to individuals within the institution. Periodic communications of the expectations can only enhance the institution’s commitment in encouraging an environment of compliance.

**Example**

In *Effective Compliance Systems: A Practical Guide for Educational Institutions*, the University of Texas (U.T.) System describes the process it employs in making employees aware of compliance, which starts at the highest levels: “An example of general messages to employees is the yearly statement of operating philosophy, which is sent to each U.T. System employee by their chief executive officer. This is a positive statement of the operating philosophy of the institution and includes heavy emphasis on ‘doing the right thing.’ Besides this annual reminder to all employees, the chief executive officer delivers a videotaped message to all new employees about the operating philosophy and compliance as a part of the New Employee Orientation. Finally, the chief
executive ensures the importance of the compliance program by communicating to all employees the requirement for annual general compliance training.\textsuperscript{9}

Continued communication of expectations to employees from the executive leadership of the institution is paramount and enables the establishment of effective operational compliance programs.

\section{Research Compliance Program Development}

As noted earlier, in order to be effective, research compliance programs need support from the highest levels of an institution’s administration. The creation and development of the program requires such support. Furthermore, in order for the program to be viable, continued and clear commitment is critical.

There are many types of support that are required. Obviously, the program and its various components need sufficient budgetary support, adequate allocation of resources, and appropriate staffing levels. In addition, there should be a published statement that the institution is committed to research compliance.

The public statement at some institutions will come from the president, while at other institutions, it may emanate from the chief academic officer (i.e., provost or academic vice president). The level from which this public support comes should be consistent with institutional practice for other similar matters. The institutional officer articulating this statement should be high enough in the organization to ensure that the stated commitment will have the desired effect on the rest of the administration and the faculty. The individual should also be high enough in the administration to be able to ensure that the necessary resources are actually committed. If the latter is not the case, the statement of support will be regarded as an ideal, but one that lacks credibility.

There is no single best way of developing a research compliance program. Programs must be developed consistent with the institution’s culture. If an institution is governed in a centralized manner and decision making is “top down,” then the basic elements of the research compliance program should be designed to take that into account. On the other hand, if an institution is decentralized, creating a research compliance program founded on centralized decision making will very likely be unsuccessful.

Figure 3 (page 1505:14) illustrates that there are alternative ways of approaching the development of a research compliance program based on whether the institution is centralized or decentralized. The diagram is not comprehensive in that it only illustrates the major steps. One could, for instance, also add a level of complexity if one were to add the variable of whether the institution is large or small, or whether it is public or private.

Figure 3

Developing A Research Compliance Program
Basic Elements of the Process

Centralized

Decentralized

AVP/Provost

Research Compliance Executive Officer

Project Committee

Determine Program Status and Goals
- Awareness of Issues
- Awareness of Best Practices
- Awareness of Audit Results
- Assessment of Current Exposure
- Assessment of Current Responsibilities
- Policy Inventory

Roles and Responsibilities Project

Project Manager

Advisory Committee

Project Committee or by Department

Program Implementation

High Level Support and Commitment Required Throughout the Process
As noted previously, support from the upper levels of the university is absolutely essential to the success of a research compliance program. The bar along the left side of Figure 3 indicates how such support is a constant and must continue throughout the entire process, irrespective of other considerations, such as whether the institution is centralized or decentralized.

**Research Compliance Executive Officer**

As outlined in Figure 3, the first step in the process is to appoint an individual or entity that is responsible for leading the development of the program. This would be a single person — the Research Compliance Executive Officer — in the centralized model or a Project Committee in the decentralized model. Since even in the decentralized model there should be a point person, the person appointing the Project Committee (i.e., the Academic Vice President/Provost) would fill that role.

If the program development is to be done by an individual, that person cannot act in a vacuum. Input should be sought from an Advisory Committee that might be composed of the compliance-related offices and the chairs of the compliance committee. If, on the other hand, the development of the program is to be accomplished by a Project Committee, it would be wise to have that committee composed of people having compliance-related responsibilities. While the composition of the Project Committee is important, it is even more important that those involved in implementing the compliance program be consulted and their views taken seriously. While support for the development of the research compliance program from the highest level of the institution is essential, it is vital that the program have the “buy in” from those responsible for putting it into effect.

**Program Status and Goals**

Figure 1 (on page 1503:3) categorizes the various issues included in research compliance. In developing a research compliance program, however, an institution will give varying weight to these issues in terms of how much attention needs to be given to each. There are several criteria that should be used to make informed decisions concerning on which issues the institution must focus.

In order to make the appropriate decisions over research compliance program content, an objective and honest assessment of current status and future goals needs to be done in a number of areas:

- **Awareness of issues**: What level of awareness of the various issues do the institution and key players have? This includes awareness of the importance of the issues, the compliance requirements, and the risks of noncompliance.

- **Awareness of best practices**: Research should be done on what other institutions have done in terms of complying with the various issues, which approaches have been successful, and which approach(es) would fit best for an institution.

- **Awareness of external audit results**: As noted above, the risks of noncompliance should be known. Developing a compliance awareness can be furthered by making available the results of audits performed at other institutions. Reviewing these is helpful in determining actual risk. To be complete, however, the review should
include an awareness of which issues hold the most potential risk. One can gain some perspective on potential risk by reviewing such documents as the Work Plan published annually by the Department of Health and Human Services Office of the Inspector General.\[10\]

◆ **Assessment of institution’s status on each issue:** Once awareness of the various issues is achieved, that knowledge should be applied to an assessment of how well the institution is doing in terms of basic compliance as well as best practices. To be effective, the assessment must be done as objectively as possible. The institution enters the assessment from the perspective that discovered problems are not an indication of failure as much as simply an indication that improvements must be made. Two main goals in this assessment will be to determine who is currently responsible for compliance on each issue and what exposures exist.

◆ **Conduct a policy inventory:** It is very helpful to include as a part of the assessment process, a comprehensive review of existing policies and procedures. This review could also include a review of the compliance-related forms. The purpose of the inventory is to determine that current policies and procedures are up to date. A review of other institutions’ policies as well as recognized best practices should be a part of this process as a means of ensuring that the institution has appropriate policies and procedures in all areas where needed.

    One point needs to be emphasized: *Assessments, to be effective, must be done objectively and without fear of what might be found.* While self-assessments performed by offices and committees having compliance-related responsibilities may be convenient, heavy reliance on self-assessments at the development stage of the research compliance program is not the best way to ensure objectivity. Obviously these offices and committees must be consulted, but the assessments are best done by others having no self-interest in the findings.

**Program Involvement**

Once the assessments are completed, and the current status and goals of the program are determined, the institution should engage in a “Roles and Responsibilities Project.” As a result of the assessments, the institution has documentation on who is currently involved in the various compliance issues. The institution also has vital information on where exposures exist as well as best practices. By combining this information, the institution can develop a matrix of compliance issues in which the issues are broken down into procedural components, and the responsible units or individuals are identified.

This can be done in a number of different ways and formats. An abbreviated example of one format is provided in Figure 4.

Within each box in Figure 4, there should be an indication of who holds such responsibilities as implementation, review, and approval. The listed procedures should

be specific and narrowly defined. This will make the completion of the matrix much easier than if the procedures are stated broadly. Listed procedures should not include multiple functions since multiple individuals will be listed as having primary responsibility when, in fact, they may have responsibility for only part of what is listed.

As mentioned, the matrix found in Figure 4 is not a comprehensive example. To be complete the matrix should have such entities and individuals as the following:

- Sponsored Projects Office
- Principal Investigator
- Department Administrator
- Dean
- Department Chair
- Compliance Committee (each specified)
- Institutional Official (each specified)
- Compliance Offices (e.g., Environmental Health and Safety)
- Internal Audit
- Purchasing
- Human Resources

The suggested matrix is not the only way to document roles and responsibilities. It can also be done in a document organized by unit, where each unit’s research-compliance responsibilities are listed and/or described in narrative fashion. Another model would be to outline each issue in narrative form and describe procedures and roles accorded to various offices and individuals.

Finally, once the roles and responsibilities are defined, it is often helpful to create organizational charts for research compliance issues. The purpose of these charts is to illustrate the interaction between and among offices. They are also a good way to make evident the lines of responsibility, authority, and institutional support.

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11 This list is drawn in part from a NCURA Sponsored Projects Administration II conference presentation.
Ensuring Long-Term Success: Compliance Awareness Program

How does one even begin designing an effective sponsored projects compliance awareness program? Who is the audience? What should the program’s content include? How should the program be delivered: Should it be Web based or instructor led? Should an overall program be developed from the start or should it be done in “baby steps”? All excellent questions but in order to answer any of them, it is important to note that an institution must be flexible; no one approach fits all situations or all organizations.

By now it should be obvious that buy in from the “top” is essential in creating a compliance awareness program, as is the identification of a key individual (an executive director of compliance or compliance officer) to oversee the program. A commitment of technical, human, and financial resources is imperative. These requirements apply regardless if the program covers all regulatory requirements when designed or if the program is gradually built, addressing one requirement or set of requirements at a time.

Some institutions begin a compliance program based on the topic “du jour,” usually determined by external influences and what is occurring on the national scene. In some cases, the genesis of a program may be the result of an audit. Regardless of the program’s origin, an opportunity exists with any assessment to enhance the environment.

In the example below, a single area of compliance — effort reporting — is used to demonstrate how the compliance assessment process can occur. Though sponsored projects compliance is broader than a single regulatory issue, effort reporting was selected as the topic for the example as it has the attention of the federal government performing audits and institutions, whether or not the institutions are paying fines. In response to the effort-reporting concern, institutions should take stock and assess their current performance, which in turn can help determine if internal changes are necessary and the cost of those changes. Below is an abbreviated outline of some of the necessary steps an institution can take as part of such assessment.

Create a Work Plan
◆ It is important to develop a timetable or work plan identifying the steps in the process and the anticipated roll-out date of a program.

Assessment
◆ Determine if weaknesses exist with current effort-reporting process:

- Perform an assessment of the effectiveness of the existing process to better understand the contents of the effort-reporting program. Craft an inventory of federal and institution requirements against which the assessment would be measured. In general, the assessment includes

  - the review of the policies/procedures of the institution and a determination that the requirements of federal regulations are covered.
• Review recent A-133 audits, internal audits, or other external audits performed that included a sampling of effort reports. In addition, a sample audit may be performed to review the following issues:
  - Is the community fulfilling the requirements of the existing policies?
  - Are the appropriate individuals signing the effort report?
  - Did a “suitable” means of verification that the work was performed exist for those forms requiring such documentation?
  - Are forms dated?
  - Are there arithmetic errors?
    - Do percentages add up to 100 percent?
    - Are sponsor-imposed salary caps calculated correctly?
  - Are the forms completed in a timely fashion?
  - Are cost sharing commitments accounted for?
  - Is the minimum commitment to the sponsor fulfilled? If effort is less than what was committed and if required, is there appropriate documentation supporting the change in commitment?
  - Are research faculty charged 100 percent on sponsored projects engaged in nonsponsored projects activities, e.g., writing new applications, serving on university committees?
  - Are payroll controls in place to protect the integrity of the payroll process?
  - Do cost transfers of salary agree with certified effort reports or vice versa?
  - Does the Disclosure Statement (DS-2) require updating?

Analysis
◆ Analyze the results of the assessment, determining strengths, weaknesses, and the need for change in policies, procedures, and manuals.
◆ Prepare a report identifying findings and recommendations for educational program content, audience, process for identifying individuals post rollout, and method(s) of delivery.
◆ A cost analysis of program implementation may be an additional activity to complete.
Seek Approval to Move Forward
◆ Approval must be sought from the individual(s) authorized to sanction new programs and projects. Depending on the process of approval (including financial support) within the institution, an allowance for time must be built into the work plan.

Develop Educational Materials
◆ Begin revising policies, procedures, and sponsored projects handbook to address perceived problems and findings.
  • Make these materials easily accessible.
◆ Develop program content.

Communicate
◆ The “top” communicates the commitment and also announces the program, its purpose, who is required to participate, anticipated completion date, and how individuals new to the organization will be identified. The communication should also identify the key individual taking the lead in rolling out the program.
  • Communications may be done in multiple steps and in various venues with different audiences during this process. It is critical that the information is consistent, clear, and updated as needed without being overly burdensome.

Rollout
◆ During this entire process some institutions may employ the use of an advisory committee to review content and discuss what delivery methodology would work best depending on the audience. If piloting an educational program such as effort-reporting principles, the content may vary depending on the audience, which may require different presentations.

1505.8 Ensuring Long-Term Success: Compliance Assessment Process

Research institutions should evaluate and enhance the integrity of their research environments using a process of self-assessment and external peer review in an ongoing process that provides input for their continuous quality improvement.12

Once the research compliance program is established, it is critical that ongoing assessments be instituted. There are four key aspects to a research compliance assessment program:
◆ First, assessments are performed to determine which compliance activities are being conducted and managed well, and which may need improvement.

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12 Institute of Medicine and National Research Council, _op. cit._, pp. 13 and 130.
Second, assessments are useful tools in educating those responsible for aspects of research compliance regarding best practices.

Third, the assessment program should evolve into an initiative that is ongoing and self-sustaining.

Fourth, an effective assessment program can help to significantly reduce negative audit findings.

Key Aspects of the Assessment Process

The research compliance assessment process is similar to a compliance audit in that it reviews actual practices in compliance with laws, regulations, and policies. The process also reviews compliance with the institution’s policies and procedures.

The research compliance assessment process, however, is not a “snap-shot” process. Rather, a key characteristic of an effective assessment program is that it is ongoing and designed to be woven into the fabric of research compliance activities.

The assessment process should also be designed to create a working relationship between the research compliance office and the offices and committees having compliance-related responsibilities. One aspect of assessment that facilitates this relationship is that assessment findings are treated differently from audit findings. The results of formal internal audits are reported up the organizational line through the administration and to the governing board. Generally, assessment findings are reported to the office or the committee whose activities are being assessed. Problems and remedies are discussed, and monitoring and follow-up procedures are agreed upon. Occasionally, assessment results will be referred to the institutional official having responsibilities for a given compliance activity. This would occur when significant noncompliance is discovered that should be or may have to be reported to an external entity (e.g., research sponsor). It might also occur if recommendations resulting from an assessment would require a commitment of additional institutional resources. Finally, the institutional official would be consulted if the office or committee being assessed is nonresponsive to recommendations and/or refuses to cooperate in the assessment process.

Another key element of the assessment process is to provide an educational and informational resource to compliance offices and committees. While this can be addressed on an issue-by-issue basis, the research compliance office may become a central clearinghouse for research compliance materials. The research compliance Web site can be a valuable tool in establishing this clearinghouse of compliance materials with hyperlinks to online resources.

The assessment process should be designed to be a self-sustaining program. Creating a self-sustaining program could be done by educating offices and committees having research compliance responsibilities to perform self-assessments and to create a structure in which compliance awareness is built into everyday life.

A distinction was made earlier between audits and assessments. In one respect, however, the assessment process can be viewed as a “pre-audit” function. If successful, the assessment process will help offices and committees build their compliance awareness and create internal procedures and practices that enhance research compliance.
The natural result of this will not only be better-managed programs, but the exposure to negative audit findings will be lessened.

**Self-Sustaining Assessment Program**

Figure 5 illustrates the basic elements of how a research compliance program can be designed to be self-sustaining.

As shown in Figure 5, the Research Compliance Office has a dual assessment role:

◆ First, it conducts independent assessments of compliance-related programs. Though the assessment is conducted collegially, it is absolutely essential that the Research Compliance Office preserve its ability to perform assessments objectively.

◆ Second, it assists offices and committees having compliance-related responsibilities to develop and perform self-assessments. At first, the Research Compliance Office will have an educational function in that it informs the offices and committees of best practices and procedures for creating and conducting effective self-assessments. The Research Compliance Office role then evolves into one of monitoring to ensure that self-assessments are conducted by offices and committees appropriately and in ways that will achieve meaningful results.

Once the self-assessment program is established, the need for independent assessments will be reduced. It cannot, however, be completely eliminated, and the Research Compliance Office should schedule periodic reviews of compliance-related programs. The frequency will depend on several factors, among which are the effectiveness of self-assessments and the history of compliance/noncompliance of given programs.
1505.9 Conclusion

The rollout of a comprehensive research compliance program is a great accomplishment. It is, however, the beginning of a continuing process. Once in place, required updating of information and content as well as periodic assessments of research compliance functions are necessary as is the identification of individuals new to the institution or new to roles having a responsibility in this area. This is the compliance continuum.

Figure 6 illustrates that sponsored projects compliance is a continuum. Neither the support from the top nor the subsequent activities should ever “end.” If embraced by the institution, the adoption of this circle of events will not only assist in mitigating risk but will become part of the culture of the institution.
1520 Supplementary Material

This section includes expanded coverage of topics relating to research compliance. These materials are culled from a variety of authoritative sources.

1520.1 The Costs of Research Misconduct

John Dahlberg, Office of Research Integrity, U.S. Department of Health and Human Services

ORI regularly receives queries asking for its assessment of the costs associated with research misconduct investigations and of the questioned research itself. First, there is the cost to taxpayers who support this office, which is responsible for overseeing both the reviews of misconduct cases, handled by the Division of Investigative Oversight (DIO), and the education and research efforts carried out by the Division of Education and Integrity (DEI). This cost is currently about $9 million per year.

There is also the cost to cash-strapped institutions of carrying out inquiries and investigations into allegations of research misconduct. ORI does not track this, but clearly the time and resources needed for major cases has on occasion reached into the millions.

Equally important are the costs resulting from the misconduct itself. Some of the relevant cost elements were carefully considered by ORI, the National Institutes of Health (NIH), and court officials when it became necessary for the federal court in Burlington, Vermont, to calculate the damages resulting from the research misconduct of Dr. Eric Poehlman prior to his sentencing hearing. Dr. Poehlman had pled guilty to criminal and civil charges arising from a major scientific misconduct case at the University of Vermont, and ORI was asked to assist in evaluating the costs to the injured party in this case, the funding agency, NIH, and to other parties. NIH officials took the lead in evaluating how falsified data in funded grant applications would have deprived more worthy applicants of the opportunity to obtain funding and testified to that effect during the sentencing hearing. ORI noted that Dr. Poehlman’s misconduct had led to a number of costs that were significant but could not easily be calculated, if at all.

For example, the University of Vermont, despite having done an exemplary job of investigating a case of misconduct involving an internationally recognized scientist and having cooperated fully with ORI and the Department of Justice, was unfairly linked with the misconduct. The hundreds of volunteers from the Burlington area who had participated in the rather extensive procedures carried out in Dr.

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2 John Dahlberg, Ph.D. is the director of the Division of Investigative Oversight at the Office of Research Integrity, www.ori.hhs.gov.
Poehlman’s research protocols were dismayed to hear that his research results had been falsified, thereby undermining the university’s ability to continue to attract volunteers for its clinical studies. Also significant was the impact of the misconduct on the many collaborators and co-authors on the more than 200 published papers authored by Dr. Poehlman, but not directly involved in Dr. Poehlman’s scientific misconduct. A number of young scientists and physicians had Dr. Poehlman as a co-author on all or nearly all of their own publications, leading inevitably to concern and mistrust by others of their scientific output and to serious obstacles in finding new research positions.

Last, there is the cost associated with falsified publications. It would be virtually impossible to estimate how many laboratories attempt to reproduce falsified and fabricated results and how much such efforts cost scientists in time and resources. Often, these costs are borne by graduate students and postdoctoral fellows who can ill-afford the time wasted on chasing after irreproducible results.

ORI recently received a perceptive letter from Professor Eliane S. Azevêdo, Emeritus Professor of Medicine, Nucleus of Bioethics, Faculty of Medicine of Bahia, Federal University of Bahia, Brazil, who commented on secondary adverse consequences of a large body of research carried out at the University of Alabama at Birmingham that has led to 16 retractions of papers by Drs. Judith Thomas and Juan Contreras. ORI recently made findings against both researchers, leading to a 10-year debarment for Dr. Thomas and a three-year debarment for Dr. Contreras.

Professor Azevêdo was particularly concerned about how review articles and meta-analyses can perpetuate fraudulent scientific claims even after the original papers have been retracted.

For example, she notes (with minor edits by ORI): “...ORI Newsletter, Vol. 17, No. 4, entitled ‘A Major Case of Misconduct Involving Non-human Primates,’ ... left the reader with a disturbing question regarding the unrecoverable echo of its bad effect on medical practice. The retracted publications, dated from 1997 through 2005, add up to 16. So, there was plenty of time to construct a school of false ideas in medical science either through teaching, medical practice, and review papers or through meta-analysis data.”

Dr. Azevêdo continues to point out, “It is generally accepted that modern medicine must mostly be rooted in evidence produced by scientific publications. Medical professors, students, and clinicians are constantly seeking new findings in medicine aiming to offer the best for the patients. Thus, review articles on specific subject and data from meta analysis are preferable sources for updating medical knowledge. However, if this precious source of scientific information happens to be based on publications that become retracted, the harm on science will not be dismissed. The retracted publications made by single journals will have not reached review papers or through meta-analysis data.”

“As an example, a review by Knechtle SJ, published in the Philos Trans R Soc Lond B Biol Sci, 2001, May 29;356(1409):681-9, entitled ‘Treatment with immunotoxin’ cites four publications from the Thomas Laboratory that have been retracted be-
cause of false claims: Contreras, J.L., et al., 1998, *Transplantation* 65,1159-1169; Contreras, J.L., et al., 1999, *Transplantation* 68, 215-219; Thomas, J.M., et al., 1997, *Transplantation* 64, 124-135; and Thomas, J.M., et al., 1997, *Transplantation* 68, 1660-1673. Not only were the misleading papers cited, but the reviewer seemed, at the time, impressed by the Thomas work, so page 686 states, ‘Studies by J M Thomas and others, also in collaboration with the Neville Laboratory, initially focused on combining the IT with donor bone marrow infusion (Thomas et al., 1997). This laboratory, with extensive experience in donor bone marrow infusion as an adjunct to tolerance induction....’ Unfortunately, the 1997 Thomas et al. has now been retracted.”

Professor Azevêdo certainly makes an important note, to which it could be added that when papers providing results on clinical studies are plagiarized wholesale, as happens with some regularity, the risk to having the duplicated data be overrepresented in meta-analyses is very real and possibly significant, thus posing a possible additional cost to the scientific enterprise and possibly even having an adverse impact on how patients are treated.


11520.2 **Types of Noncompliance Determinations**
Office for Human Research Protections

This document provides a list of occurrences of noncompliance that the Office for Human Research Protections (OHRP) has made in compliance oversight determination letters in recent years (the document is dated February 2009). It contains a total of 51 problem areas accompanied by explanations of findings. OHRP oversees human subjects protections in research supported by the Public Health Service, including the National Institutes of Health.

Questions have been raised about the drop in determination letters and cases opened by OHRP in recent years. The total for 2010 was 18 letters posted at its Web site (www.hhs.gov/ohrp/compliance/letters), compared to 36 in 2009, 34 in 2008 and 37 in 2007. OHRP posted 86 letters in 2006; its all-time high was 146 letters posted in 2002.

**Initial and Continuing Review**

1. **Research Conducted without IRB Review and/or Approval.** In accordance with HHS regulations at 45 CFR 46.103(b) and 46.109(a), the IRB must review and approve all non-exempt human subject research covered by an assurance before the research can be conducted.

2. **Failure of IRB to Review HHS Grant Applications.** HHS regulations at 45 CFR 46.103(f) require that an institution with an approved assurance shall certify that each application or proposal for research covered by the assurance has been reviewed and approved by an IRB designated under the institution’s federalwide assurance (see “IRB Review of Applications for HHS Support” www.dhhs.gov/ohrp/humansubjects/guidance/aplrev.htm).

3. **IRB Lacks Sufficient Information to Make Determinations Required for Approval of Research.** OHRP determined that the IRB, when reviewing protocol applications, lacked sufficient information to make the determinations required for approval of research under HHS regulations at 45 CFR 46.111. For example, the IRB reviewed insufficient information regarding (a) risks to subjects and how they are minimized; (b) subject recruitment and enrollment procedures; (c) the equitable selection of subjects; (d) provisions to protect the privacy of subjects and maintain the confidentiality of data; and (e) additional safeguards to protect the rights and welfare of subjects who are likely to be vulnerable.

4. **Inadequate IRB Review at Convened Meetings.** In accordance with HHS regulations at 45 CFR 46.108(b), review of proposed research must be conducted by the IRB at convened meetings at which a majority of the members of the IRB are present, including at least one member whose primary concerns are in nonscientific areas, except where expedited review is appropriate under HHS regulations at 45

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1 This material is taken from OHRP, Division of Compliance Oversight, “OHRP Compliance Oversight Activities: Determinations of Noncompliance, 02/04/2009,” www.hhs.gov/ohrp/compliance/findings.
CFR 46.110(b). OHRP determined have determined that little substantive review took place at convened meetings. Protocols undergoing initial/continuing review and protocol amendments undergoing review were neither individually presented nor discussed at a convened meeting of the IRB. Furthermore, OHRP had noted little evidence that IRB approval of research was consistently based on consideration of the determinations required under HHS regulations at 45 CFR 46.111. Specifically, the IRB appeared not to have considered systematically and rigorously such issues as risks to subjects and how they are minimized, equitable selection of subjects and subject recruitment, privacy and confidentiality protections, and additional safeguards for subjects likely to be vulnerable to coercion or undue influence.

(5) Members Present at Convened IRB Meetings Lacked the Expertise to Make Determinations Required for Approval of Research. HHS regulations at 45 CFR 46.107(a) provide, among other things, that each IRB shall have at least five members, with varying backgrounds to promote complete and adequate review of research activities commonly conducted by the institution. In addition, the regulations provide that the IRB be sufficiently qualified through the experience and expertise of its members to promote respect for its advice and counsel in safeguarding the rights and welfare of human subjects and be able to ascertain the acceptability of proposed research in terms of institutional commitments and regulations, applicable law, and standards of professional conduct and practice. The convened IRB, when reviewing protocol applications, must have sufficient expertise among the members present at the meeting to make the determinations required for approval of research under HHS regulations at 45 CFR 46.111. OHRP determined that the members of the IRB present at convened meetings did not have the background and expertise necessary to review the research being proposed.

(6) Approval of Research Not Approved by the IRB. HHS regulations at 45 CFR 46.113 require that the IRB have authority to suspend or terminate approval of research that is not being conducted in accordance with the IRB’s requirements or that has been associated with unexpected serious harm to subjects. In addition, HHS regulations at 45 CFR 46.112 provide that non-exempt human subjects research that
has been approved by an IRB may be subject to further appropriate review and approval or disapproval by officials of the institution. However, such officials may not approve non-exempt human subjects research if it has not been approved by an IRB. OHRP determined that the IRB voted to suspend research, and that an institutional official rescinded or delayed that suspension, in violation of HHS regulations at 45 CFR 46.113 and 112.

(7) Contingent Approval of Research with Substantive Changes and no Additional Review by the Convened IRB. OHRP determined that the IRB frequently approved research contingent upon substantive modifications or clarifications that were directly relevant to the determinations required by the IRB under HHS regulations at 45 CFR 46.111 without requiring additional review by the convened IRB. OHRP noted that when the convened IRB requests substantive clarifications or modifications regarding the protocol or informed consent documents that the IRB needs in order to make the determinations required by the IRB under HHS regulations at 45 CFR 46.111, IRB approval of the proposed research must be deferred, pending subsequent review by the convened IRB of responsive material, unless the research is eligible for review under an expedited review procedure.

(8) IRB Meeting Convened without Quorum (No Nonscientist Present). HHS regulations at 45 CFR 46.108(b) require that, except when an expedited review procedure is used, research be reviewed at convened meetings at which a majority of the members of the IRB are present, including at least one member whose primary concerns are in a nonscientific area (hereinafter referred to as “nonscientist”). OHRP determined that the IRB failed to meet this requirement for certain IRB meetings. Thus, any actions taken at these meetings that required a quorum were not valid under the HHS regulations at 45 CFR part 46. OHRP emphasized that should the quorum fail during a meeting (e.g., those with conflicts being excused, early departures, absence of a nonscientist member), the IRB may not take further actions or votes that require a quorum unless the quorum is restored.

(9) IRB Meeting Convened without Quorum (Lack of a Majority). HHS regulations at 45 CFR 46.108 require that, except when an expedited review procedure is used, the IRB review proposed research at convened meetings at which a majority of the members of the IRB are present. OHRP determined that the IRB failed to meet this requirement for certain IRB meetings. Thus, any actions taken at these meetings that required a quorum were not valid under the HHS regulations at 45 CFR part 46. OHRP emphasized that should the quorum fail during a meeting (e.g., those with conflicts being excused, early departures, absence of a nonscientist member), the IRB may not take further actions or votes that require a quorum unless the quorum can be restored.

(10) IRB Members with Conflicting Interest Participated in IRB Review of Research. HHS regulations at 45 CFR 46.107(e) stipulate that no IRB member may participate in the IRB’s initial or continuing review of a project in which the member has a conflicting interest, except to provide information requested by the IRB. OHRP determined that IRB members inappropriately participated in the initial and continuing review of protocols for which they had a conflicting interest, for example, by
voting on protocols on which they were investigators.

(11) **Inadequate Continuing Review.** Continuing review of research must be substantive and meaningful. HHS regulations describe at 45 CFR 46.111 (and at subparts B, C, and D of 45 CFR part 46 when applicable) the criteria that must be satisfied in order for the IRB to approve research. These criteria must be satisfied when the IRB conducts continuing review of research either at a convened meeting or under an expedited review procedure. These criteria include, among other things, determinations by the IRB regarding risks, potential benefits, informed consent, and additional safeguards for subjects likely to be vulnerable to coercion or undue influence. OHRP determined that continuing review of research by the IRB was not substantive and meaningful.

(12) **Failure to Conduct Continuing Review at Least Once per Year.** HHS regulations at 45 CFR 46.109(e) require that continuing review of research be conducted by the IRB at intervals appropriate to the degree of risk, but not less than once per year. The regulations make no provision for any grace period extending the conduct of the research beyond the expiration date of IRB approval. Additionally, where the convened IRB specifies conditions for approval of a protocol that are to be verified as being satisfied by the IRB chairperson or another IRB member designated by the chairperson, continuing review must occur no later than one year after the date the protocol was reviewed by the convened IRB, not on the anniversary of the date the IRB chairperson or his or her designee verifies that IRB-specified conditions for approval have been satisfied. OHRP determined that the IRB failed to conduct continuing review of research at least once per year and that in some cases the IRB has granted extensions beyond the expiration date of IRB approval.

(13) **Continuing Review for Follow up of Subjects in Research Protocols.** HHS regulations at 45 CFR 46.109(e) state that an IRB shall conduct continuing review of research covered by this policy at intervals appropriate to the degree of risk, but not less than once per year. HHS regulations at 45 CFR 46.102(f) define human subject as a living individual about whom an investigator (whether professional or student) conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information. Even where (i) the research is permanently closed to the enrollment of new subjects; and (ii) all subjects have completed all research-related interventions, continuing review is required as long as the research remains active for long-term follow-up of subjects and continues to involve non-exempt human subjects research. Furthermore, continuing IRB review of research is required where the remaining research activities are limited to data analysis of individually identifiable private information (see 63 FR 60364-60367, category (8)). OHRP determined that continuing review did not occur in protocols involving follow-up activities.

**Expedited Review Procedures**

(14) **Inappropriate Use of Expedited Review Procedures for Initial or Continuing IRB Review.** HHS regulations at 45 CFR 46.108(b) require that the IRB review proposed research at convened meetings at which a majority of the members of the IRB
are present, including at least one member whose primary concerns are in nonscientific areas, except where expedited review is appropriate under HHS regulations at 45 CFR 46.110. HHS regulations at 45 CFR 46.110(b)(1) limit the use of expedited review procedures for initial or continuing review to specific research categories published in the Federal Register at 63 FR 60364-60367 (see www.dhhs.gov/ohrp/humansubjects/guidance/expedited98.htm) when the research is determined to involve no more than minimal risk. OHRP determined that:

(a) The IRB inappropriately applied expedited review to research that involved minimal risk but did not appear in the categories of research published in the Federal Register.

(b) The IRB inappropriately applied expedited review to research that involved greater than minimal risk.

(15) Inappropriate Use of Expedited Review Procedures for Review of Protocol Changes. HHS regulations at 45 CFR 46.108(b) require that the IRB review proposed research at convened meetings at which a majority of the members of the IRB are present, including at least one member whose primary concerns are in nonscientific areas, except where expedited review is appropriate under HHS regulations at 45 CFR 46.110. HHS regulations at 45 CFR 46.110(b)(2) permit use of expedited procedures for review of minor changes in previously approved research during the period for which approval is authorized. OHRP determined that the IRB has employed expedited procedures to review changes that were more than minor.

(16) Failure to Advise IRB Members of Expedited Approvals. HHS regulations at 45 CFR 46.110(c) require that all IRB members be advised of research proposals that have been approved under an expedited review procedure. OHRP determined that all IRB members were not advised of (a) research protocols approved at time of initial or continuing review under an expedited review procedure, or (b) minor changes in research protocols approved under an expedited review procedure.

(17) Expedited Review Conducted by Someone Other than an IRB Member. HHS regulations at 45 CFR 46.110(b) state that under an expedited review procedure, the review may be carried out by the IRB chairperson or by one or more experienced reviewers designated by the chairperson from among the members of the IRB. OHRP determined that an individual who was not a member of the IRB approved human subject research purportedly under an expedited review procedure, in violation of HHS regulations at 45 CFR 46.103(b), 45 CFR 46.109(a) and 45 CFR 46.110(b).

Reporting of Unanticipated Problems, Noncompliance, Suspensions, and Terminations

(18) Failure to Report Unanticipated Problems, Noncompliance, Suspensions, and Terminations, to IRB, Institutional Officials, and OHRP. OHRP determined that unanticipated problems involving risks to subjects or others or serious or continuing noncompliance or suspensions or terminations of IRB approval were not reported to appropriate institutional officials or the IRB or OHRP or the head of the sponsoring federal department or agency as required by HHS regulations at 45 CFR 46.103(a) and 46.103(b)(5).
IRB Review of Protocol Changes

(19) Changes to Research Initiated Without IRB Review and Approval. HHS regulations at 45 CFR 46.103(b)(4)(iii) require that the IRB review and approve all proposed changes in a research activity, during the period for which IRB approval has already been given, prior to initiation of such changes, except when necessary to eliminate apparent immediate hazards to the subjects. OHRP found no documentation that the IRB reviewed and approved protocol changes prior to initiation or that certain protocol changes were initiated without IRB approval and/or approval, in circumstances where the changes were not necessary to eliminate apparent immediate hazards to the subjects.

(20) Inadequate IRB Review and/or Approval of Protocol Changes. HHS regulations at 45 CFR 46.103(b)(4)(iii) require that the IRB review and approve all proposed changes in a research activity, during the period for which IRB approval has already been given, prior to initiation of such changes, except when necessary to eliminate apparent immediate hazards to the subjects. OHRP determined that the IRB’s procedures for reviewing protocol modifications were inadequate. In some cases, the IRB chairperson or designated IRB reviewer from among the IRB members approved such modifications in the absence of a complete description of the proposed changes.

OHRP noted that when reviewing proposed changes to research, the IRB must also receive sufficient information to make the determinations required for approval of research under HHS regulations at 45 CFR 46.111 and, when applicable, under subparts B, C, and D of 45 CFR part 46, although OHRP did not cite these regulatory provisions when making this determination in the past.

Application of Exemptions

(21) Inappropriate Application of Exempt Categories of Research. HHS regulations at 45 CFR 46.101(b) delineate six specific categories of research that are exempt from the requirements of 45 CFR part 46. OHRP determined that the institution applied an exemption to research activities that exceed these categories.

(22) Inappropriate Application of Exemption 4. HHS regulations at 45 CFR 46.101(b)(4) exempt research that only involves the collection or study of existing data, documents, records, pathologic specimens, or diagnostic specimens provided specified conditions are met. OHRP noted that such materials must already exist at the time the research is proposed. OHRP determined instances where this exemption was applied to research involving data, documents, pathologic specimens, or diagnostic specimens that did not exist at the time the research was proposed.

(23) Inappropriate Application of Exemption 2 for Research Involving Children. HHS regulations at 45 CFR 46.401(b) stipulate that the exemption at 45 CFR 46.101(b)(2) for research involving survey or interview procedures or observations of public behavior does not apply to research covered by 45 CFR part 46, subpart D (Additional Protections for Children Involved as Subjects in Research), except for research involving observation of public behavior when the investigators do not participate in the activities being observed. OHRP determined that exemption 2 was inappropriately applied to survey and observational research involving children.
Informed Consent

(24) Failure of the Investigator to Obtain the Legally Effective Informed Consent of Subjects or of the IRB to Appropriately Waive the Requirements to Obtain Informed Consent. HHS regulations at 45 CFR 45.116 state that no investigator may involve a human being as a subject in research covered by the regulations unless (a) the investigator has obtained the legally effective informed consent of the subjects or the subject’s legally authorized representative, or (b) the IRB has waived the requirements to obtain informed consent in accordance with 45 CFR 46.116(c) or (d), or in accordance with the provisions for waiver of informed consent for research in emergent settings published in the *Federal Register*, Vol. 61, pp. 51531-51533. OHRP determined that the investigator initiated human subject research without obtaining legally effective informed consent of subjects and without the IRB appropriately waiving these requirements.

(25) Failure to Document Informed Consent or of the IRB to Appropriately Waive the Requirement to Document Informed Consent. HHS regulations at 45 CFR 46.117(a) require that informed consent be documented by the use of a written consent form approved by the IRB and that is signed by the subject, or the subject’s legally authorized representative, unless the IRB waives this requirement in accordance with 45 CFR 46.117(c). OHRP determined that informed consent was not documented by a written consent form signed by the subject(s) for this research and there was no IRB waiver of this requirement.

(26) Failure to Provide a Copy of the Informed Consent Document (ICD) to the Subject or the Subject’s Legally Authorized Representative. HHS regulations at 45 CFR 46.117(a) require that informed consent be documented by the use of a written consent form approved by the IRB and signed by the subject or the subject’s legally authorized representative unless the requirement for documentation of informed consent has been waived by the IRB in accordance with HHS regulations at 45 CFR 46.117(c). The regulations further require that a copy of the informed consent document shall be given to the person signing the form. OHRP determined that a copy of the informed consent document was not provided to the person signing the informed consent form.

(27) Inadequate ICD for Specific Research/Lack of Basic Elements. HHS regulations at 45 CFR 46.116(a) require that when seeking informed consent specific information shall be provided to each subject unless the IRB approves a consent procedure that does not include, or that alters, some or all of the required basic elements of informed consent provided in accordance with 45 CFR 46.116 (c) or (d). OHRP determined that the informed consent documents reviewed and approved by the IRB failed to include and/or adequately address the following basic elements required by HHS regulations at 45 CFR 46.116(a):

(a) Section 46.116(a)(1): (i) A statement that the study involves research; (ii) an explanation of the purposes of the research; (iii) the expected duration of the subject’s participation; and (iv) a complete description of the procedures to be followed, and identification of any procedures that are experimental.
(b) Section 46.116(a)(2): A description of any reasonably foreseeable risks and discomforts.

(c) Section 46.116(a)(3): A description of any benefits to the subject or others that may reasonably be expected from the research.

(d) Section 46.116(a)(4): A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the subject.

(e) Section 46.116(a)(5): A statement describing the extent, if any, to which confidentiality of records identifying the subject will be maintained.

(f) Section 46.116(a)(6): For research involving more than minimal risk, an explanation as to whether any compensation and an explanation as to whether any medical treatments are available if injury occurs and, if so, what they consist of, or where further information may be obtained.

(g) Section 46.116(a)(7): An explanation of whom to contact for answers to pertinent questions about the research and research subjects' rights (should include someone other than the investigator), and whom to contact in the event of a research-related injury to the subject.

(h) Section 46.116(a)(8): A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the subject is otherwise entitled, and the subject may discontinue participation at any time without penalty or loss of benefits to which the subject is otherwise entitled.

Moreover, OHRP found no documentation that the IRB approved a consent procedure that did not include, or that altered, some of the required basic elements of informed consent noted above in accordance with 45 CFR 46.116(c) or (d).

(28) Inadequate ICD for Specific Research/Lack of Additional Elements. HHS regulations at 45 CFR 46.116(b) require that, when appropriate, additional elements of information shall be provided to subjects. OHRP determined that the following additional elements of informed consent should have been included in the informed consent documents under HHS regulations at 45 CFR 46.116(b):

(a) Section 46.116(b)(1): A statement that the particular treatment or procedure may involve risks to the subject (or to the embryo or fetus, if the subject is or may become pregnant) that are currently unforeseeable;

(b) Section 46.116(b)(2): Anticipated circumstances under which the subject's participation may be terminated by the investigator without regard to the subject's consent.

(c) Section 46.116(b)(3): Any additional costs to the subject that may result from participation in the research;

(d) Section 46.116(b)(4): The consequences of a subject's decision to withdraw from the research and procedures for orderly termination of participation by the subject.

(e) Section 46.116(b)(5): A statement that significant new findings developed during the course of the research that may relate to the subject's willingness to continue participation will be provided to the subject.
(f) Section 46.116(b)(6): The approximate number of subjects involved in the study.

Moreover, OHRP found no documentation that the IRB approved a consent procedure that did not include, or that altered, some of the required additional elements noted above in accordance with 45 CFR 46.116(c) or (d).

(29) **ICD Language too Complex.** HHS regulations at 45 CFR 46.116 require that informed consent information be in language understandable to the subject or the subject’s legally authorized representative. OHRP determined that the informed consent information provided to subjects would not be understandable to some subjects.

(30) **Exculpatory Language in ICDs.** HHS regulations at 45 CFR 46.116 prohibit the inclusion of any exculpatory language in informed consent through which the subject is made to waive, or appear to waive, any of the subject’s legal rights. OHRP determined certain language in the IRB-approved informed consent documents was exculpatory.

(31) **Enrollment Procedures did not Minimize Possibility of Coercion or Undue Influence.** HHS regulations at 45 CFR 46.116 require that investigators seek the legally effective informed consent of subjects under circumstances that minimize the possibility of coercion or undue influence. OHRP determined that informed consent was not sought from prospective subjects under circumstances that minimized the possibility of coercion or undue influence.

**IRB Membership, Expertise, Staff, Support, and Workload**

(32) **Failure To Have An Unaffiliated IRB Member.** HHS regulations at 45 CFR 46.107(d) require that each IRB include at least one member who is not otherwise affiliated with the institution and who is not part of the immediate family of a person who is affiliated with the institution. OHRP determined that the IRB did not include any such member.

(33) **Lack of Prisoner/Prisoner Representative for IRB Review of Research Involving Prisoners.** HHS regulations at 45 CFR 46.304 require that at least one member of an IRB that reviews research involving prisoners be a prisoner, or a prisoner representative with appropriate background and experience to serve in that capacity, except that where a particular research project is reviewed by more than one IRB only one IRB need satisfy this requirement. When the convened IRB reviews research involving prisoners (including initial review, continuing review, review of protocol modifications, and review of unanticipated problems involving risks to subjects or others), the prisoner or prisoner representative must be present as a voting member. OHRP determined that the IRB failed to meet this requirement when reviewing research projects involving prisoners.

(34) **IRB Chairperson and Members Lack Sufficient Understanding of HHS Regulations.** HHS regulations at 45 CFR 46.107(a) provide, among other things, that the IRB shall be sufficiently qualified through the experience and expertise of its members to promote respect for its advice and counsel in safeguarding the rights and welfare of human subjects and shall be able to ascertain the acceptability of
proposed research in terms of institutional commitments and regulations, applicable law, and standards of professional conduct and practice. OHRP determined that the IRB chairperson and/or IRB members lacked a detailed understanding of the specific requirements of the HHS regulations for the protection of human subjects. As a result, IRB determinations sometimes deviated from these requirements.

(35) **Designation of an Additional IRB under an FWA without Prior OHRP Approval.** HHS regulations at 45 CFR 46.103(b) state, in part, that assurances applicable to federally supported or conducted research shall include designation of one or more IRBs established in accordance with the requirements of the regulations, and for which provisions are made for meeting space and sufficient staff to support the IRB’s review and recordkeeping duties. Designation of additional IRBs under an FWA requires prior notification of and approval by OHRP. OHRP determined that the institution established an additional IRB that reviews research covered by its FWA without such approval.

(36) **Inadequate IRB Resources.** HHS regulations at 45 CFR 46.103(b)(2) require that institutions provide meeting space and sufficient staff to support the IRB’s review and recordkeeping duties. OHRP determined that the IRB lacked sufficient meeting space and/or staff to support the IRB’s review and recordkeeping duties.

(37) **Lack of IRB Knowledge of Local Research Context.** HHS regulations at 45 CFR 46.107(a) require, among other things, that the IRB be (a) sufficiently qualified through the diversity of the members, including consideration of race, gender, and cultural backgrounds and sensitivity to such issues as community attitudes, to promote respect for its advice and counsel; and (b) able to ascertain the acceptability of proposed research in terms of institutional commitments and regulations, applicable law, and standards of professional conduct and practice. Institutions have a responsibility to ensure that all IRBs designated under an OHRP-approved Assurance possess sufficient knowledge of the local research context to satisfy these requirements. OHRP determined that the IRB did not have the background and expertise to review the above-referenced research based on its failure to include members with sufficient understanding of the cultural conditions, including the social, economic, and political status, of the subject population.

OHRP noted that the IRB also must have sufficient background and expertise regarding the local research context in order to make the determinations required for approval of research as described within HHS regulations at 45 CFR 46.111 and applicable subparts, although OHRP did not cite this regulatory provision when making this determination in the past.

(38) **Lack of IRB Professional Competence to Review Specific Research Activities.** HHS regulations at 45 CFR 46.107(a) require, among other things, that the IRB possess the professional competence necessary to review specific research activities. OHRP determined that the IRB did not possess the professional competence necessary to review specific research activities.

OHRP noted that the IRB also must have sufficient professional competence in order to make the determinations required for approval of research under HHS regulations at 45 CFR 46.111, although OHRP did not cite this regulatory provision.
when making this determination in the past. OHRP also noted that under HHS regulations at 45 CFR 46.107(f) an IRB may, in its discretion, invite individuals with competence in special areas to assist in the review of issues which are beyond or in addition to that available on the IRB and IRB’s cited for this determination did not seek to invite individuals with competence in relevant special areas, although this was not noted when the determinations were originally made by OHRP.

**IRB Documentation, Findings, and Procedures**

(39) **Lack of Appropriate Written IRB Procedures.** OHRP determined that the institution did not have written IRB procedures that adequately describe the following activities, as required by HHS regulations at 45 CFR 46.103(a) and 46.103(b)(4) and (5):

(a) The procedures that the IRB will follow for conducting its initial review of research.

(b) The procedures that the IRB will follow for conducting its continuing review of research.

(c) The procedures that the IRB will follow for reporting its findings and actions to investigators and the institution.

(d) The procedures that the IRB will follow for determining which projects require review more often than annually.

(e) The procedures that the IRB will follow for determining which projects need verification from sources other than the investigators that no material changes have occurred since previous IRB review.

(f) The procedures that the IRB will follow for ensuring prompt reporting to the IRB of proposed changes in a research activity, and for ensuring that such changes in approved research, during the period for which IRB approval has already been given, may not be initiated without IRB review and approval except when necessary to eliminate apparent immediate hazards to the subject.

(g) The procedures for ensuring prompt reporting to the IRB, appropriate institutional officials, any department or agency head, and OHRP of: (a) any unanticipated problems involving risks to subjects or others; (b) any serious or continuing noncompliance with 45 CFR part 46 or the requirements or determinations of the IRB; and (c) any suspension or termination of IRB approval.

(40) **Failure of an Institution Engaged In HHS-Conducted or –Supported Research to Hold an OHRP-Approved FWA.** HHS regulations at 45 CFR 46.103(a) require that each institution “engaged” in human subjects research provide OHRP with a satisfactory assurance to comply with the regulations, unless the research is exempt under 45 CFR 46.101(b). (Please see OHRP guidance at www.dhhs.gov/ohrp/humansubjects/guidance/engage08.pdf.)

In general, an institution is considered *engaged* in a particular non-exempt human subjects research project when its employees or agents for the purposes of the research project obtain: (1) data about the subjects of the research through intervention or interaction with them; (2) identifiable private information about the subjects
of the research; or (3) the informed consent of human subjects for the research [45 CFR 46.102(d), (f)].

OHRP determined that the institution was engaged in human subject research under a particular project and the institution was not covered by an OHRP-approved FWA for this research. If the project in question is ongoing, OHRP noted that involvement of the unassured institution in non-exempt human subject research activities under the specified HHS award must be suspended until OHRP approved an FWA, unless it is determined that it is in subjects’ best interest to continue.

(41) Inadequate IRB Records. OHRP determined that IRB records fail to include all the documentation required by HHS regulations at 45 CFR 46.115(a).

(42) Inadequate IRB Minutes. HHS regulations at 45 CFR 46.115(a)(2) require that minutes of IRB meetings be in sufficient detail to show attendance at the meetings; actions taken by the IRB; the vote on these actions including the number of members voting for, against, and abstaining; the basis for requiring changes in or disapproving research; and a written summary of the discussion of controverted issues and their resolution. OHRP determined that minutes of IRB meetings failed to meet these requirements.

(43) Poorly Maintained IRB Files. HHS regulations at 45 CFR 46.115(a) require that the institution prepare and maintain adequate documentation of IRB activities. OHRP found that in numerous instances among the IRB files examined by OHRP, it was difficult to reconstruct a complete history of all IRB actions related to the review and approval of the protocol. In some instances, OHRP could not determine what the IRB actually approved.

(44) Failure of IRB to Determine That Criteria for IRB Approval Are Satisfied. HHS regulations at 45 CFR 46.111 delineate the criteria that must be satisfied in order for an IRB to approve research covered by the regulations. OHRP determined that for certain research the IRB failed to determine that the following requirements were satisfied:

(a) Risks to subjects are minimized.

(b) Risks to subjects are reasonable in relation to anticipated benefits, if any, to subjects, and the importance of the knowledge that may reasonably be expected to result.

(c) Selection of subjects is equitable.

(d) Informed consent will be sought from each prospective subject or the subject’s legally authorized representative.

(e) Informed consent will be appropriately documented.

(f) When appropriate, the research plan makes adequate provision for monitoring the data collected to ensure the safety of subjects.

(g) When appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data.

(h) When some or all of the subjects are likely to be vulnerable to coercion or undue influence, additional safeguards have been included in the study to protect the rights and welfare of vulnerable subjects.
(45) **Failure of IRB to Make Required Findings When Reviewing Research Involving Children.** HHS regulations at 45 CFR 46.404-407 require specific findings on the part of the IRB for approval of research involving children. OHRP determined that the IRB did not make the required findings when reviewing research involving children.

(46) **Failure of IRB to Make Required Findings When Reviewing Research Involving Prisoners.** HHS regulations at 45 CFR 46.305-306 require specific findings on the part of the IRB for approval of research involving prisoners. OHRP determined that the IRB failed to make the required findings when reviewing such research. OHRP also determined that the IRB approved research involving prisoners even though the research failed to satisfy subpart C criteria.

(47) **Failure of IRB to Make and Document Required Findings for Waiver of Informed Consent.** HHS regulations at 45 CFR 46.116(c) and (d) require that the IRB find and document specific criteria when approving waiver or alteration of some or all of the required elements of informed consent. OHRP determined that the IRB failed to satisfy these requirements.

(48) **Failure to Make Required Findings for IRB Waiver of a Signed Informed Consent Document.** HHS regulations at 45 CFR 46.117(c) requires specific findings on the part of the IRB for waiver of the requirements for the investigator to obtain a signed consent form from all subjects. OHRP determined that the IRB failed to make the required findings when approving such waivers.

(49) **Inadequate Retention of IRB Records.** HHS regulations at 45 CFR 46.115(b) require that IRB records be retained for at least 3 years, and records relating to research that is conducted be retained for at least 3 years after completion of the research. All records must be accessible for inspection and copying by authorized representatives of HHS at reasonable times and in a reasonable manner. OHRP determined that the institution failed to retain IRB records OR records relating to research for at least 3 years after completion of the research at that study site.

(50) **Failure to Notify Investigators/Institution of IRB Actions.** HHS regulations at 45 CFR 46.109(d) require that an IRB notify investigators and the institution in writing of its decision to approve or disapprove the proposed research activity, or of modifications required to secure IRB approval of the research activity. If the IRB decides to disapprove a research activity, it shall include in its written notification a statement of the reasons for its decision and give the investigator an opportunity to respond in person or in writing. OHRP determined that the IRB did not notify investigators and the institution in writing of its decision to approve or disapprove proposed research or of modifications required to secure IRB approval of the research.
Other

(51) Failure of Signatory Official to Fulfill Obligations. HHS regulations at 45 CFR 46.103(c) require that an institution’s assurance of compliance with the regulations for the protection of human subjects shall be executed by an individual authorized to act for the institution and to assume on behalf of the institution the obligations imposed by the regulations. OHRP determined that the Signatory Official failed to fulfill his or her obligations imposed by the HHS regulations for the protection of human subjects and the institution’s FWA.

OHRP noted that HHS regulations at 45 CFR 46.103(a) require that each institution engaged in research which is covered by this policy and which is conducted or supported by a federal department or agency shall provide written assurance satisfactory to the department or agency head that it will comply with the requirements set forth in the regulations, although we did not cite this regulatory provision when making this determination in the past. Similarly, Public Law 99-158 Sec. 491(a) requires that the HHS Secretary shall by regulation require that each entity which applies for a grant, contract, or cooperative agreement under this act for any project or program which involves the conduct of biomedical or behavioral research involving human subjects submit in or with its application for such grant, contract, or cooperative agreement assurances satisfactory to the secretary.
Federal Oversight of Animals in Research: Who Does What

AIS editors

Ensuring the appropriate care and management of any animals used in research is an important component of any institution’s research policy. There are primarily two agencies charged with ensuring the welfare of laboratory research animals used by federal grantee institutions: the U.S. Department of Agriculture and the Public Health Service (National Institutes of Health). Together these agencies establish guidelines and requirements for the proper treatment and care of animals used in research. Two pieces of legislation and a set of principles provide the framework the agencies follow to set the institutional practices concerning animals’ care and use:

- Animal Welfare Act, 7 USC §2131 et. seq. (enforced by USDA’s Animal and Plant Health Inspection Service, APHIS)

The Food and Drug Administration’s Center for Veterinary Medicine (CVM) regulates the manufacture and distribution of food additives and drugs that will be given to animals from which human foods are derived as well as those for pet (or companion) animals. CVM is also responsible for regulating drugs, devices, and food additives given to, or used on, animals.

Framework for Responsibilities

APHIS, FDA, and NIH recently renewed a 20-year memorandum of understanding concerning laboratory animal welfare (MOU 225-06-4000). Among other things, the MOU provides an overview of the responsibilities of each federal agency, which may prove helpful to research administrators. (Link to MOU: http://grants.nih.gov/grants/olaw/references/finalmou.htm.)

As stated in the MOU, common features in the agencies’ programs include “standards and policies aimed at promoting laboratory animal welfare, the maintenance of registries/inventories of institutions and facilities subject to agency policies and regulations, the periodic conduct of routine and ‘for cause’ inspections or site visits, efforts designed to promote voluntary compliance, and the application of a range of sanctions when necessary.”

Individual agency responsibilities are outlined in the MOU as follows:

- Animal and Plant Health Inspection Service (www.aphis.usda.gov). APHIS has primary responsibility for overseeing compliance with the Animal Welfare Act and its implementing regulations (9 CFR Chapter 1, Subchapter A, Parts 1–3.) “The USDA regulations establish standards for the humane treatment of laboratory animals and a registration/licensing procedure for identifying institutions that breed, sell, transport, hold, and use such animals. Compliance...is monitored by an active inspection program that provides for periodic inspections by veterinary medical officers or suitably trained paraprofessionals. Serious
noncompliance is dealt with by procedures that range from civil penalties, to the issuance of ‘cease and desist’ orders, to the confiscation of animals.”

◆ **Office of Laboratory Animal Welfare** ([http://grants.nih.gov/grants/olaw](http://grants.nih.gov/grants/olaw)). OLAW, part of NIH, is responsible for the implementation of the Public Health Service Policy on Humane Care and Use of Laboratory Animals. The PHS policy implements the Health Research Extension Act of 1985 (and is based on the U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training). Standards for institutional programs and facilities are described in the *Guide for the Care and Use of Laboratory Animals* (published by the National Academy of Sciences). OLAW “fosters” compliance through the animal welfare assurance, which must be approved by OLAW and should describe the institution’s program in compliance with the PHS policy. OLAW “monitors compliance by evaluating institutional reports of noncompliance. Institutions are required to correct confirmed noncompliance and institute appropriate measures to prevent repeated noncompliance. Potential sanctions for continued noncompliance appear in the NIH Grants Policy Statement, Part II.”

◆ **Food and Drug Administration** ([www.fda.gov/AnimalVeterinary](http://www.fda.gov/AnimalVeterinary)). FDA has primary responsibility for enforcing the Federal Food, Drug, and Cosmetic Act. The FFDCA’s good laboratory practice regulations (21 CFR Part 58) “establish standards for the proper conduct of nonclinical laboratory studies that include animals. Compliance is assessed through an active program of periodic inspections carried out by trained field inspectors. Serious noncompliance is dealt with by procedures ranging from study rejection to laboratory disqualification.”
Implementing Financial Compliance Requirements by Focusing on the ‘How’

Ann Meehan Saputelli, University of Pennsylvania School of Medicine and Martin Smith, The George Washington University

Introduction

Financial compliance has evolved as the regulatory environment has changed over the years. What started as proactive initiatives with monitoring programs and internal audits has manifested into strict, reactive requirements mandated oftentimes with little time to implement and inconsistent guidance. Anyone who submitted ARRA reports this past quarter can attest to the overly dynamic nature of today’s compliance requirements. We are taking this opportunity to share our experiences that come from auditing sponsored awards and managing post-award transactions. These experiences have led us to general best practices that can be implemented from varying perspectives — a central sponsored programs office down to the department or project level. Our recommendations are not “blue sky” ideas, rather they are practical ways to implement the spirit of financial compliance requirements by focusing on the “how” when conducting the day-to-day business of financial research administration.

Brief Overview of Fundamental Elements of a Compliance Program

The Health and Human Services (HHS), Office of the Inspector General (OIG) published draft guidance in the Federal Register (Vol. 70, No. 227, Nov., 28, 2005) that outlined eight elements considered to be fundamental to an effective compliance program:

1. Implementing written policies and procedures,
2. Designating a compliance officer and compliance committee,
3. Conducting effective training and education,
4. Developing effective lines of communication,
5. Conducting internal monitoring and auditing,
6. Enforcing standards through well publicized disciplinary guidelines,
7. Responding promptly to detected problems and undertaking corrective action, and
8. Defining roles and responsibilities and assigning oversight responsibility.

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1 This article is reprinted from the NCURA Magazine, Vol. XLII, No. 7, December 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
Research institutions have adopted this guidance by writing policies and procedures, hiring compliance officers or staff to work in a compliance capacity, intensified training and education programs geared towards financial compliance, and reinforced roles and responsibilities documented in policies or in a formal responsibility matrix. Many research institutions have compliance hotlines, websites with links to OMB circulars, agency policy statements, etc. All of these efforts are very well intentioned — but research administrators still post questions to listserv groups, still attend conferences, still watch webinars, and still seek out assistance in meeting financial compliance requirements — why? Mostly because the field of research administration is ever changing, but partly because compliance requirements are not accompanied by instructions on how to implement them.

Research institutions have addressed most of the pertinent questions — who is responsible for adhering to compliance requirements, what are the rules we have to follow, when do rules need to be implemented and adhered to, where do we conduct training, look for problems, find information and go for help; and why do we want to be compliant — to avoid fines and penalties and to preserve the reputation of the institution. However, the answer may lay in the “How.”

Identifying your Institution’s Financial Compliance Model

Many people reading this article may be thinking right about now: “we don’t have a formal financial compliance program” — but we ask you to think about it again. When you go to New Hire Orientation and get a pencil with a compliance hotline phone number printed on it, someone in your institution made a decision to make this the “How” to communicate your institution’s approach to the Developing effective lines of communication element of OIG compliance guidance. When internal audit shows up unannounced to audit a list of transactions recently charged to the sponsored program you manage at a department level, this is your institution’s solution to the “How” to achieve the Conducting internal monitoring and auditing element of OIG compliance guidance. When you go through the list you can probably think of a number of initiatives attempted or ongoing at your institution which are intended to meet one or all of the suggested fundamental compliance elements.

The problem may be that your institution may have only incorporated a small number of the recommendations. For example, one institution may have decided to use existing resources in internal audit to focus on auditing financial transactions charged to sponsored awards. This may have resulted in new findings and disallowed expenditures, along with increased tension between the researchers and administration. Maybe even after a few new policies have been written, faculty and staff have been trained on the new policies, and the policies have been posted on a new website, when they were tested through auditing, the non-compliant behavior still exists.
Implementing Compliance Requirements Considering Your Institution’s Existing Structure

You know a well written policy when you see one — it has sections covering who should know the policy, the office responsible for the policy, the date it was implemented, the date it was last reviewed, sections pointing to the applicable regulations, the offices responsible for the policy and so on. Many institutions leave the implementation, and subsequent compliance, to the procedures — which may be documented or word of mouth. This is where the best intentioned policy simply does not translate into compliance best practices. How to write a good policy requires it to be written considering your institution’s existing structure. For example, let’s assume your institution drafts a policy on Allowable Costs and requires all costs to be approved by the PI. If your procurement process does not have a step in the workflow process that requires the PI’s approval, then your institution has hamstrung itself from ever being compliant with this well intentioned policy.

Another example would be an institution that writes a Cost Transfer policy that requires the department administrator to provide sufficient back-up documentation to support why the costs are allowable and necessary for the award being charged — yet if this is an electronic request, does not provide the means for someone to attach this documentation to the request. The list could go on and on as to how well intentioned policies prove difficult to comply with because of system, process or human limitations — a Record Retention policy where there may not be a solution for departments to actually keep documentation (be it online storage or physical storage for paper transactions) an Effort Reporting policy that defines an appropriate certifier as someone with suitable means to ensure the work was performed, yet does not clarify the OMB Circular A-21 guidance of that requirement.

Just because your institution may not have considered the practicality of the policies or procedures does not make you exempt from being compliant with the fundamental requirements of those policies — it can be done. Borrowing a philosophy from the for-profit world, Hewlett-Packard operates under the motto of the HP Way, which is based on the belief that people want to do a good job and will do so if given the right environment and tools. Financial compliance can be achieved with the right tools, including guidance to implement compliance requirements into day-to-day operations. On the left is a chart showing the fundamental elements of a compliance program along with suggestions as to how a central sponsored program office, department administrator, principal investigator and the research staff can comply regardless of any limitations your institution may have.

Conclusion — Be Positive, Take Ownership, and Succeed!
You are reading this article and belong to NCURA because you care about your role in research administration. Your commitment to staying informed is a critical requirement for the compliance success of your institution. No policy is perfect, no

2 Changing by Design, Organizational Innovation at Hewlett-Packard, by Deone Zell, Copyright 1997 Cornell University.
system is absent of flaws, all humans will make mistakes. Keep good intentions, stay positive and continue to take ownership of your role in financial compliance.

<table>
<thead>
<tr>
<th>Compliance Elements</th>
<th>Central Sponsored Programs Office Staff</th>
<th>Department Administrator</th>
<th>Principal Investigator (PI)</th>
<th>Research Staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Implementing written policies and procedures</td>
<td>Formal policies and procedures should exist for all areas of compliance, dated, assigning roles and responsibilities, referencing applicable sponsored regulations, while accurately representing what the institution is capable of achieving today.</td>
<td>Needs to keep aware of new policies, consider the impact on day-to-day operations, and incorporate the new or revised policies into their desktop procedures to assure compliance—while also communicating to the research staff.</td>
<td>The PI as the technical and financial director of the sponsored award; is the champion of financial compliance at the project / lab level; without their buy-in, the institution will not fare well.</td>
<td>These are the people who initiate transactions and ultimately make the initial decisions about the reasonableness, allocability, allowability, and consistent treatment of costs; therefore need to understand how to incorporate policies into their day-to-day operations.</td>
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<tr>
<td>2) Designating a compliance officer and compliance committee</td>
<td>Many institutions have assigned compliance staff to central sponsored programs offices, while others have created dedicated groups in internal audit, stand-alone compliance offices, or in the VP for Research areas.</td>
<td>The department administrator is the compliance official for their designated area; as the responsible person closest to the financial transactions.</td>
<td>The PI is the leader who fosters and environment of compliance and tolerates nothing less than complete adherence to policies and procedures.</td>
<td>The responsibility here is to send information back up the chain of command about the efficacy of compliance initiatives and the practicality of their implementation.</td>
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<tr>
<td>3) Conducting effective training and education</td>
<td>Develop meaningful training programs in a collaborative way to get the best compliance outcomes.</td>
<td>Participate in the development of training programs, attend training, implement to the department procedures, and train end users.</td>
<td>Conform to objectives of training initiatives by supporting institutional training goals.</td>
<td>Implement guidance into day to day operations.</td>
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<tr>
<td>4) Developing effective lines of communication</td>
<td>Provide websites with good content with easy to navigate layout, publish contact information for the office, and most importantly—answer your phone and emails within a reasonable time frame.</td>
<td>Listen, communicate, and collaborate.</td>
<td>Be engaged, accountable, and interested in resolving potential non-compliance issues.</td>
<td>Speak up when something is wrong or doesn’t feel right.</td>
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<td>5) Conducting internal monitoring and auditing</td>
<td>Frequently monitor award transactions (i.e. not just at close-out); and develop formal monitoring programs using audit techniques.</td>
<td>Review detail expenditure transaction reports on a regular (i.e. monthly) basis</td>
<td>Meet with their department administrator at least on a quarterly basis to monitor award expenditures.</td>
<td>“Do it right the first time” by only engaging in compliant transactions.</td>
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<tr>
<td>6) Enforcing standards through well publicized disciplinary guidelines</td>
<td>The institution across the board needs to have a commitment to compliance and a code of conduct followed by all of its faculty, staff, and students engaged in research.</td>
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7) Responding promptly to detected problems and undertaking corrective action

Be fair and consistent in identifying and mediating issues—regardless of faculty prestige, dollar value of the award, or history of good or bad interactions with the parties responsible for the potential non-compliance.

Follow-up, follow-up, follow-up … when overwhelmed with numerous responsibilities, the department administrator must be diligent in following up on detected problems and correcting those issues promptly.

Encourage research staff to openly report issues and cooperate with department or central administration when issues are communicated from the top down.

Tell people when something might have been done wrong and see through it to make sure it will be been fixed.

8) Defining roles and responsibilities and assigning oversight responsibility

Everyone involved in the financial administration of sponsored awards needs to be accountable for their role in each process and take personal ownership of their responsibilities.

About the Authors

Ann Meehan Saputelli, CHFP, CPA, Director of Financial Compliance, University of Pennsylvania School of Medicine. Ann has over 20 years of diversified research administration and healthcare financial management experience. Ann currently serves as the Director of Financial Compliance in the Office of Research Compliance and Integrity at the University of Pennsylvania, School of Medicine (SOM). Prior to joining the University in December 2001, Ann worked in the Health Care Consulting Practice of PricewaterhouseCoopers, LLP for over four years. One of Ann’s current responsibilities as Director is providing guidance to the SOM community on the application and interpretation of University Policy. Ann has extensive experience in clinical trials financial operations: budgeting, recording of revenue and expenditures, cash receipts and the development of research patient care rate agreements. Ann obtained her Bachelor’s degree in Accounting from La Salle University and is also a Certified Healthcare Financial Professional (CHFP) and a member of both the American and Pennsylvania Institutes of Certified Public Accountants.

Martin Smith recently joined The George Washington University as the Associate Director for Strategy and Compliance, in the Office of Grant and Contract Accounting Services. Martin earned an M.B.A. in Finance from La Salle University, and a B.B.A. in Accounting from Temple University. Martin has 9 years of research administration experience working directly for higher education institutions in financial compliance, finance, and post-award roles; and as a consultant performing compliance risk assessments and effort reporting system implementations.
Debarment for Lab Sabotage Signals ORI Expansion, May Spur Similar Efforts

AIS editors

About a year after a series of intentional “experimental busts” occurred in a cancer lab, the Office of Research Integrity has issued a misconduct determination and three-year debarment against a former University of Michigan post-doc student who confessed to being the culprit. This marks the first time ORI has taken action when the misconduct involved “intentional sabotage,” versus the more common falsification, fabrication and plagiarism typically involving grant applications, presentations, papers or other documents (see http://ori.hhs.gov/blog/2011/04/the-curious-case-of-vipul-bhrigu).

The case is likely to trigger similar complaints of possible misconduct stemming from sabotage, believed to be somewhat common in labs. This finding and debarment are an extension of previous ORI enforcement activities, John Dahlberg, director of ORI’s Division of Investigative Oversight, told RRC. What’s new, Dahlberg said, is that ORI “had not previously confronted an act of sabotage.”

ORI’s decision against Vipul Bhrigu was hailed by those familiar with the case who had been hoping the agency would take action. “Hallelujah!” was the reaction of Jennifer Shambrook, director of the Grant and Contract Management Office of St. Jude Children’s Research Hospital, when told of ORI’s finding by RRC. What Bhrigu had done was “horrendous,” and akin to “lying, cheating and stealing,” in her view.

ORI investigates possible misconduct based on reports from institutions that receive Public Health Service funding, and responds to complaints referred to the office by whistle-blowers and others. ORI became involved in summer 2010, by which time Bhrigu had already been caught on hidden camera and had confessed to sabotaging tissue in Petri dishes by spraying alcohol in them. Bhrigu, who could not be located for comment, pleaded guilty to “malicious destruction of public property” and was facing sentencing. (For more details, see box, p. 1520:31.)

The university did not consider the incident to be misconduct under federal law, intending to deal with it as a police matter and personnel issue. After learning of the circumstances, ORI officials contacted the university and ultimately disagreed that the case had to end there. Agency staff reviewed the lab notebooks, Bhrigu’s taped police confessions and court appearances, and gathered other information.

The fact that the post-doc’s actions affected his colleague’s lab results was sufficient grounds for a federal finding of misconduct, ORI believes. The regulations permit a misconduct finding related to an activity that occurs “during the conduct of the research,” Dahlberg explained. “The research record was compromised” as a result of the sabotage and did not occur as a “random” act, he added.

1 The article is reprinted from Report on Research Compliance, June 2011, www.reportonresearchcompliance.com
Notice Details Destructive Acts

According to the misconduct notice posted on the ORI website, and the debarment announcement in the April 27 Federal Register, ORI found that [Bhrigu] knowingly and intentionally tampered with research materials related to five (5) immunoprecipitation/Western blot experiments and switched the labels on four (4) cell culture dishes for cells used in the same type of experiments to cause false results to be reported in the research record.” ORI also found that Bhrigu “tampered with laboratory research materials by adding ethanol to his colleague’s cell culture media, with the deliberate intent to effectuate the death of growing cells, which caused false results to be reported in the research record.”

Bhrigu’s punishment lasts for a three-year period, beginning April 7, during which he is

- “Debarred from eligibility for any contracting or subcontracting with any agency of the United States Government and from eligibility for, or involvement in, non-procurement programs of the United States Government, referred to as ‘covered transactions,’ pursuant to HHS’ Implementation of OMB Guidelines to Agencies on Governmentwide Debarment and Suspension (2 CFR 376 et seq.)”; and

- “Prohibited from serving in any advisory capacity to the U.S. Public Health Service (PHS), including but not limited to service on any PHS advisory committee, board, and/or peer review committee, or as a consultant.”

ORI has the authority to ban someone for a range of time, typically three or five years. The most severe infractions can bring a lifetime debarment.

After issuing the finding, ORI officials posted a short note on the office’s blog, explaining the action. It posed the question, “Does ORI regularly pursue cases of sabotage? The answer is ‘It depends.’ ORI pursues cases involving plagiarism, falsification, and fabrication in PHS-funded research. The sabotage, itself, was not the reason that ORI made findings of research misconduct in the case against Bhrigu. In this case, ORI’s jurisdiction stemmed from false results that were recorded in the research record and were caused by Bhrigu’s intentional tampering with the graduate student’s PHS-funded research,” according to the blog entry.

Dahlberg clarified that a misconduct finding can be made in a lab with PHS funding, or when equipment is used that was purchased with PHS funding; it is not necessary that the research itself be funded by “core” PHS dollars for a finding to be made. However, in this case the lab did have a National Cancer Institute grant. While this case is “curious,” as ORI’s blog termed it, in many ways it’s more mundane.

Sabotage is “not infrequent” in labs, Dahlberg said, but in this case the act was extreme. “If he had been more subtle, the damage would have been far worse,” he added. If the cells had not died, for example, the research perhaps could have continued with the cells impaired, leading to false results that could have been reported in a paper someday. Dahlberg said this incident shows that it’s important to “keep an open mind” about misconduct, and perhaps reconsider “how to think about things that happen in the lab.” When in doubt, his office is always available to help
and answer questions, he added.

Misconduct most often is committed by young investigators under extreme stress, Dahlberg has found. His advice to universities to prevent misconduct is simple, he said, and consists of doing three things “better”:

- **Ensure better mentorship** of graduate and post-doc students by their supervisors and principal investigators.

- **Provide better ways of handling stress**. PIs put stress on post-docs and graduate students, who also put stress on themselves. Particularly students on VISAs can feel intense stress due to the short period allowed in the U.S. and the pressure to do well.

- **Insistence on visual inspection of data**. Too often, said Dahlberg, PIs review summary data or charts, graphs and Power Point presentations their fledgling investigators create. To put this into practice, universities could require PIs to look at raw data.

St. Jude’s Shambrook adds that a supportive leadership environment is also essential to preventing misconduct. “A lot of individuals are involved [when misconduct is suspected] and everyone has to take ownership. We need to have an environment where people feel safe enough to ask the [misconduct] question without fearing they are kissing their career goodbye.”

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**Until Cameras Showed the Truth, Sabotage Victim Was Prime Suspect**

Theodora Ross, head of a cancer research lab at the University of Michigan, calls the incident that led to the first-ever misconduct finding and debarment by the Office of Research Integrity based on sabotage in a lab as “Bhrigu-gate,” “the case of the intoxicated HELA cells,” and “the crazy case of our sloppy saboteur” (among other terms).

And Ross, also an associate professor in the Internal Medicine Department, admits that the person she and her colleagues most strongly suspected of being the culprit was, in fact, the graduate student who was the victim of the “sloppy saboteur,” Vipul Bhrigu, a post-doc also in Ross’ lab. In her quest to understand what was happening and who was responsible, Ross followed the university’s directive and even sent the aggrieved student to a therapist, and the woman underwent a lie detector test.

Bhrigu was caught after cameras were installed in the lab; he pled guilty to destruction of property and is reportedly making restitution from India, where he is from. After his sentencing, ORI became involved and imposed a three-year debarment from participation in Public Health Service-funded research, due to a criminal act that altered the scientific record.

Since the incident was resolved, Ross has not been shy about discussing it. Indeed, she shared her experiences not only with RRC and other news organizations, but has spoken about them at a scientific meeting and upon invitation to institutions, including St. Jude Children’s Research Hospital. To her, the retelling of the tale is part of her duty. “[M]aybe this will scare off putative saboteurs,” she told RRC, adding that perhaps “it should become a professional responsibility to share our experiences widely — however devastating — so that they can help others.”

Ross became enmeshed in the saga of the doomed cells in February 2010 when her graduate student,
Heather Ames, emailed her to say she suspected someone of tampering with her work by “putting alcohol in her tissue media.” Ross herself came to the lab, where Ames “showed me the flask” that reeked of alcohol. Saying she had no suspects, Ames told Ross “she’d been having a lot of experimental busts recently and wondered if that were due to such felonious activities. I said, I’d have to sleep on the problem and get back to her in the a.m.,” Ross said at a January meeting of the National Science Advisory Board for Biosecurity in Washington, D.C. The theme of the meeting was “Public Consultation on Guidance for Enhancing Personnel Reliability and Strengthening the Culture of Responsibility at the Local Level.”

Deeply troubled, Ross frantically called her colleagues, with the consensus being that she should “relax,” because most likely Ames was behind the problems. Ross didn’t buy this thinking initially, but eventually “it did make sense because the method of ‘sabotage’ was just too obvious. Although it was sad to think this way, I figured we could just chalk this craziness up to stress,” she said at the meeting. The recommendation was made to send Ames to a “school therapist for eval and assistance,” and Ross told Ames the purpose was to “make the therapist available to her in this time of stress.” Ames was never told she was considered a suspect, Ross said.

The police were eventually called in and a decision was made to install hidden cameras in the lab, which revealed Bhrigu spraying a liquid into cell material. Ross was stunned. “Bhrigu was the only unsuspected lab member...the most cooperative, passionate, friendly guy that you could imagine,” she said to the NSABB attendees. After being confronted, he confessed and was later sentenced to pay restitution.

“Based on our experience with laboratory sabotage and the feedback we received from others with similar lab personnel mishaps, if you suspect somebody of wrongdoing in the laboratory, your suspicion is probably misplaced and the true criminal — and they are criminals — is somebody you don’t suspect,” Ross said. Ross told RRC she thought the incident was research misconduct under federal law and was “very happy” that ORI agreed.

The sabotage had repercussions beyond the one student’s work, Ross said. “We don’t trust anything he touched in the lab and discarded all of that data [and] re-agents he was ever involved in generating,” she told RRC. At the NSABB meeting, Ross said that her lab was “in a slow, painful recovery,” and that she was “completely distracted for close to a year. This was not good for the lab’s health or productivity.”

At St. Jude’s invitation, Ross delivered a lecture to its post-doctoral students as part of their training on research integrity so they could learn from the experience, according to Jennifer Shambrook, director of St. Jude’s Grant and Contract Management Office. At the time Ross spoke, ORI had not yet taken action against Bhrigu.

Regardless, Shambrook said the post-docs seemed to understand that what Bhrigu did was wrong, and got the message that “these kinds of things can happen,” and when they do, the “right thing” is to call them out.

Ross said she learned from the experience as well, including that her situation was not unique. “As to lessons learned, we found that there are a lot of cases like ours but people don’t routinely talk about it,” she told RRC. “It reminds me of the culture in the 1960s that surrounded cancer. If you had breast cancer you didn’t discuss it openly....It was taboo. Thank heavens Betty Ford came along and talked about her mastectomy openly. Anyway, we — me, the detective and the university regulatory affairs people — were on our own trying to figure out what to do. They had never heard of such a case before. But we learned of more cases during and after the investigation.”
During her NSABB talk, Ross said that when misconduct is suspected, for example, “get help,” and “keep detailed notes.” Should a similar incident be brought before a judge, institutions should encourage the police and prosecutor to be “emotionally invested” in the case, Ross said, and she noted that writing a detailed “victim’s impact statement” can help in obtaining a financial penalty.

Another piece of advice: “Don’t publicize anything until it is legally [concluded]. I have since heard about cases of fraud where papers were retracted before getting a confession from the suspects....That’s a mess.”

Implementing New Policies for Financial Conflict of Interest at the University of Central Florida

Andrea Adkins, Tammie McClellan, and John Miner, University of Central Florida

Introduction

In 1995 the Public Health Service (PHS) and the Office of the Secretary of Human Health Services under the Department of Health and Human Services (DHHS) published regulations (42 CFR 50 Subpart F and 45 CFR 94) to promote objectivity and ensure integrity in research endeavors funded by PHS agencies, which includes the National Institutes of Health (NIH) (The Federal Register, 53256, 76:165 [25 August 2011]). NIH is the largest federal research granting agency with $30.9 billion invested annually in medical research (NIH Budget, 2012).

Prior to the federal regulations, institutions and professional organizations implemented their own versions of the federal mandate. The 1995 regulations required institutions receiving federal research funding to create, maintain, and enforce written financial conflict of interest policies (FCOI) to ensure the FCOI is identified, mitigated, or eliminated in the conduct of research. The 1995 regulation also required principal investigators to disclose potential FCOI and to comply with their institution’s FCOI policies. The purpose of the 1995 regulations was to ensure that the design, conduct, and publication of research was reasonably free from bias generated through financial gain by an individual or institution conducting research (The Federal Register, 53256, 76:165 [25 August 2011]).

The 1995 regulations began to prove inadequate as private biomedical research funding soared from $37.1 billion in 1994 to $94.3 billion in 2003, well exceeding federal funding. Despite the billions of dollars in biomedical research funding from the NIH, industry or private sources provided more than 55% of total biomedical research funding. The financial relationships between industry and biomedical researchers that followed created the potential for compromises in research integrity, jeopardizing the public trust and the public health. The DHHS Office of the Inspector General (OIG) reported in 2009 that “vulnerabilities exist at grantee institutions regarding conflicts” (The Federal Register, p. 53257, 76:165 [25 August 2011]). This report and increased public scrutiny ultimately led to the adoption of changes to the 1995 regulation in 2011.

UCF’s Preparedness Background

In 2009 UCF’s Office of Research & Commercialization, University Compliance and Ethics Office, Office of Faculty Relations, and Office of General Counsel joined in an effort to overhaul and formalize the university’s procedures concerning financial conflict of interest (FCOI) and conflict of commitment (COC) to ensure compliance with federal regulations, state statutes, and university policies. At this time, a simplistic one-page document was replaced with a comprehensive electronic conflict of interest (COC) system.
interest (COI) and conflict of commitment (COC) reporting, monitoring, and tracking system. Requirements for reporting, reviewing, approving, and storing disclosures drastically changed from disassociated papers in file cabinets to a unified, central electronic repository containing detailed disclosures as well as state exemptions and monitoring plans. This new repository is available to the UCF administration, departments, and research administrators.

**Online Systems**

UCF’s conflict of interest and commitment on-line system is implemented within the university’s Academic Research and Grants Information System (ARGIS®), used exclusively by researchers, research administrators, staff, and university administrators for tracking all research contract and grant activity from pre-award through commercialization. By incorporating the disclosure submission, review, approval, monitoring, and tracking process digitally within ARGIS®, UCF gained the advantage of correlating each investigator’s submitted disclosure data with information on file for the investigator’s proposals, awards, subcontracts, other agreements, inventions, and technology transfer licenses. This was an important feature for UCF’s institutional reviewers who may not have always known the interrelated facets of an investigator’s research endeavors.

UCF’s ARGIS® system clearly identifies the types of potential conflict of interest activities requiring disclosure, as well as the rationale for the questions asked. During the reporting of potential conflicts, UCF investigators are provided with links to policies, regulations, and definitions of terms for each question asked through the use of underlined terms and an information icon next to each question. For those UCF investigators completing the disclosure but not involved with outside activities, the form is short with just 10 Yes/No style questions. When UCF investigators positively affirm that certain activities or situations apply, the on-line submission form expands to prompt for additional sub-questions. Multiple responses to each of the 10 questions can also be provided if the investigator works with more than one outside entity.

Once an investigator submits the report of potential conflict of interest, disclosures are directly routed for review and approval to the investigator’s immediate supervisor, the department chair, college dean, and, depending on the responses, the compliance officer in UCF’s Office of Research & Commercialization for a regulatory review. Lastly, the disclosure or amendment is routed to UCF’s Faculty Relations Office for a final administrative review. If during the review a disclosure indicates a potential conflict of interest, the disclosure is diverted to the UCF Conflict of Interest Committee for review and recommendations. The ARGIS® system requires comments from the reviewers, which are viewable by all reviewers, the investigator, and the COI committee members, thereby establishing context and an historical record. Figure 1520.6-1 provides an example and overview of UCF’s conflict of interest and commitment process and system.

**UCF’s 5 Steps to Implementation of the PHS 2011 Regulations**

Upon issuance of the PHS 2011 regulations for each PHS-funded grant or coopera-
Supplementary Material

Figure 1520.6-1. UCF Conflict of Interest & Commitment System—Overview

Step 1—Created a Potential COI and COC Research Policy

To effectively address both financial conflict of interest and commitment as it applies to research, UCF established a new conflict of interest or conflict of commitment in research policy. This new policy expands on the existing university policy, addressing FCOI and COC by expanding who must disclose, when they must disclose, why they must disclose, what they must report, and in the new FCOI guidelines, the remedies UCF will enforce in the event of noncompliance. To ensure
the policy conformed to the revised PHS regulations, the checklist published by the NIH was consulted. The checklist is available at: http://grants.nih.gov/grants/policy/oui/coi/checklist_policy_dev_20120412.pdf (NIH, 2012).

Under the final rule UCF is required to monitor significant financial interest for all investigators (including their spouses and children) responsible for the design, conduct, or reporting of research, not just the principal investigator. The financial threshold for disclosure dropped from $10,000 to $5,000 and requires disclosure of remuneration and/or equity interest and any income realized from non-university intellectual property rights that exceeds $5,000 to be reported. Additionally, all extramural travel costs paid on behalf of an investigator and related to the investigator’s institutional responsibilities must be disclosed. Implementing these procedures to comply with the final rule will result in additional federal reporting obligations for UCF, specifically for PHS sponsored awards. ARGIS® will be used to track, store and produce reports for submission to sponsoring agencies as required.

To communicate the revised policy and guidelines document across the university, the following communication plan was executed:

1. New policy announcement sent by the President and Provost to the Dean’s Council and Vice Presidents.
2. New policy announcement sent by the President and Provost to the Faculty Senate.
3. New policy announcement sent by the Vice President for Research Office to Deans, Associate Deans, and Chairs.
4. New policy announcement sent by the Vice President for Research to administrative unit directors affected by the policy change.
5. New policy announcement sent by the Director of Compliance, Office of Research & Commercialization, to academic and research unit faculty and administrators.
6. Policy information statement provided to new faculty upon appointment.
7. New web page was established and dedicated to the conflict of interest policy.
8. On-line COI system training updated to refer to new policy and to inform users of changes to the disclosure questions when completing their submission.

UCF’s policy can be found at: http://www.policies.ucf.edu/documents/4-504.2ReportingaPotentialConflictofInterestorConflictofCommitmentinResearch-FinalonLetterhead08-20-12.pdf

**Step 2—Created COI and COC Policy Guidelines**

Perhaps of equal or greater importance is ensuring that when a new policy is established, a guideline is created to advise administrative staff and investigators on the implementation and procedures to ensure FCOI and COC policy compliance. UCF has done this in a comprehensive guideline document incorporated into the new policy.

If an investigator has a financial interest exceeding $5,000, related to an investigator’s institutional responsibilities, UCF requires disclosure prior to applica-
tion to a sponsor and no later than time of award and prior to the expenditure of any funds. If new activity or discovery of a potential COI occurs after research has started, disclosure is required within 30 days.

UCF is requiring a disclosure from all of its investigators and also subrecipient’s investigators on all proposals and awards, not just PHS awards and agreements. The subrecipient can choose to either adhere to UCF’s policies or provide certification that its own conflict of interest policy complies with Title 42 CFR Parts 50 and 94. Should the subrecipient be unable to provide this certification, UCF will require the subrecipient and its investigators to be subject to UCF policies, procedures, and guidelines. This includes participation by the subrecipient’s investigators in UCF’s mandatory training programs on FCOI such as those described herein. UCF is preparing additional written guidelines for its subrecipient’s investigators to participate and comply with UCF’s FCOI policies.

Enforcement of policies requires careful consideration. In establishing its new policies and procedures, UCF formulated remedies within its guidelines that apply when an investigator fails to comply with the new policy. The institutional remedies require that a project account be suspended until the investigator complies; inactivation of projects and accounts; and delay, suspension, or termination of subrecipient agreements if their investigators have not completed training or not submitted the disclosures required. Lastly, personnel disciplinary action(s) may be implemented by UCF to ensure compliance with the university’s conflict of interest policies and procedures, should other measures prove to be ineffective.

**Step 3—Implemented Financial Conflict of Interest Training**

An important supplement to the FCOI guidelines is the inclusion of mandatory training for investigators prior to participation in any research, to occur no less than once every four years. UCF’s Office of Research & Commercialization has the responsibility of providing and overseeing the FCOI training as well as tracking the investigator’s completion. The training is designed to educate researchers, raising awareness of both the new policy and UCF’s reporting requirements. UCF’s training implementation plan requires online training through the Collaborative Institutional Training Initiative (CITI) for faculty, staff, and students responsible for the design, conduct, and reporting of research. At the time of proposal submission, any investigator expected to have these research responsibilities must be identified among the research team members, including students. Completion of two CITI modules is required prior to engaging in funded research activity, while Module 4 is optional.

◆ **Module #1:** Financial Conflicts of Interest: Overview, Investigator Responsibilities, and COI Rules

◆ **Module #2:** Institutional Responsibilities as They Affect Investigators

◆ **Module #4:** Conflicts of Commitment, Conscience, and Institutional Conflicts of Interest (optional)

The minimum requirement for any student responsible for the design, conduct,
and reporting of sponsored research is to complete CITI Module 1. Principal Investigators are also encouraged to provide conflict of interest and other ethical training to their graduate students during the sponsored research activity.

A Responsible Conduct in Research workshop series was also established by the UCF College of Graduate Studies and in concert with the Office of Research & Commercialization. This workshop series is required for each doctoral candidate and addresses conflict of interest scenarios as well as ethical decision making and personal integrity.

**Step 4—Establish Conflict of Interest Committee**

As UCF’s activities in research grow, so does the complexity of and opportunity for potential conflicts. For example, six years ago UCF expanded its program offerings with a new College of Medicine, concentrating on biomedical research which can be prone to FCOI issues. UCF will establish a new Conflict of Interest Committee to review significant financial interests reported by investigators. Appropriately applying the bias principle to determine true conflicts will require people who are trained and responsible, and who have a high level of appropriate expertise to understand the nuances of various research situations. In addition to establishing a Conflict of Interest Committee, UCF’s Office of Research and Commercialization intends to recruit a full-time, dedicated compliance officer to manage the FCOI program. The new compliance officer and committee will review and monitor reported significant financial conflicts of interest at UCF.

When a potential significant financial interest is reported, UCF’s compliance officer will refer the disclosure to UCF’s Conflict of Interest Committee which will determine whether a conflict may exist and the appropriate mitigation measures to manage or eliminate the conflict by requiring state exemption requests, monitoring plans, or other management plans to ensure the research is free from bias or financial conflicts. ARGIS® will track a disclosure throughout the review process, to include recommended actions, and will produce reports as required to be sent to the research sponsor. Some general information about an investigator’s significant financial interests will also be made publicly available on a UCF-dedicated web page.

**Step 5—Modified Proposal Form and Potential Conflict Disclosure Questions**

UCF is implementing its new policy on reporting of conflicts of interest through procedural updates to two key forms completed by investigators: 1) the proposal transmittal form used internally to initiate and receive approval for a research proposal, and 2) the annual employee disclosure of conflicts of interest and commitment.

The on-line UCF proposal transmittal and review form in ARGIS® was modified so that during the electronic routing of the proposal, the principal investigator is asked to indicate who among the project team will be responsible for the design, conduct, or reporting of research. Each person so identified is then notified via email of their need to respond to UCF’s FCOI disclosure questions. The ARGIS® system then tracks for compliance the date of disclosure and appropriately manages
for multi-year awards and changes in project staffing.

Although questions regarding financial conflict of interest were included in UCF’s existing COI disclosure, the final rule’s change of the significant financial threshold required UCF to modify the questions asked of investigators. The new questions have also been rephrased to refer to an investigator’s “institutional responsibilities” versus simply research. The type of remuneration an investigator receives, including the form of equity interests held, reimbursed or extramural travel, and non-university royalty income, including its sources, were added to the list of questions. Figure 1520.6-2 highlights the new, revised questions asked by UCF of in-

Figure 1520.6-2. UCF Revised Disclosure Form (showing questions 1-3 re: FCOI)
vestigators to assess whether a significant financial conflict of interest exists or not.

**Conclusion**

When asked whether or not the 2011 revised PHS regulations fixed something that was broken, Doug Backman, UCF’s Director of Compliance and Contracts and Grants, replied, “No. The final rule just demands a more complete disclosure in order to remain in compliance. And, this change puts more of the burden on the institution versus the investigator. Also, the new reporting requirements to the government are more stringent.” When faced with the choice of having federal funding suspended or remain in compliance, UCF acted swiftly to stay compliant. While this new rule still does not address institutional conflicts of interest, it places the burden on institutions receiving PHS funding to be the monitoring and enforcement arm for research integrity. UCF employees responsible for making policy and procedural changes, along with its web-based research administration system ARGIS®, made the plan for implementation of the new procedures within one year feasible and without unnecessary complications. The effectiveness of UCF’s newly revised conflict of interest policies and procedures to address the final rule will be judged over time and following the next A-133 or OIG audits.

**Author’s Note**

The authors wish to thank Mr. Doug Backman, Director of Compliance and Director of Contracts and Grants in the Office of Research and Commercialization, University of Central Florida, for providing institutional information on conflict of interest policies and procedures. The opinions expressed herein are those of the authors only and are not those of the University of Central Florida.

**Literature Cited**


**About the Authors**

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**John Miner** has worked at the Office of Technology Transfer at UCF since 1999 and is an Assistant Director of Physical Sciences. He graduated with his undergrad degree from UCF in 2001 and is scheduled to graduate in August 2013 with his Master of Research Administration degree. He is active in the Association of University Technology Managers (AUTM), serving as an Assistant Vice President for Metrics and Surveys. He chairs the annual Salary Survey, a publication examining the salaries in the Technology Transfer field for academic and non-profit organizations across North America, Europe and Asia.
¶1520.7 NIH Guidance on Significant Changes to Animal Activities

National Institutes of Health

Guidance on Significant Changes to Animal Activities
Notice Number: NOT-OD-14-126

Key Dates
Release Date: August 26, 2014
Related Announcements: NOT-OD-14-063
Issued by: National Institutes of Health (NIH)

Purpose
This Notice provides guidance to Public Health Service (PHS) awardee institutions and Institutional Animal Care and Use Committees (IACUCs) on significant changes to animal activities.

Background
The PHS Policy on Humane Care and Use of Laboratory Animals (Policy) (IV.C.1.) and Animal Welfare Regulations (9 CFR 2.31 (d) (1) (i)- (iv)) define the responsibilities of the IACUC regarding review and approval of proposed significant changes to animal activities. Changes to approved research projects must be conducted in accordance with the institution’s Assurance, the United States Department of Agriculture (USDA) Animal Welfare Act and Animal Welfare Regulations and must be consistent with the Guide unless an acceptable justification for a departure is presented. Additionally, IACUCs are responsible for assuring that the changes to approved animal activities meet the requirements described in the PHS Policy IV.C.1.a-g.

IACUC approval of proposed animal activities or significant changes to previously approved animal activities is granted after full committee review (FCR) or designated member review (DMR). Additionally, institutions may establish and IACUCs may approve policies (e.g., guidance documents, standard operating procedures, drug formularies) for the conduct of animal activities. These policies must be reviewed by the IACUC at appropriate intervals of no less than once every three years to ensure they are appropriate and accurate.

Significant Changes to Animal Activities Previously Approved by the IACUC
The IACUC has some discretion to use IACUC-reviewed and -approved policies to define what it considers a significant change, or to establish a mechanism for determining significance on a case-by-case basis in accordance with the PHS Policy IV.C.1.a-g. It is the IACUC’s responsibility to clearly define and communicate its policy for determining significance to investigators.

In brief, significant changes include changes that have, or have the potential to have, a negative impact on animal welfare (see paragraph 1., below). In addition, some activities that may not have a direct impact on animal welfare are also consid-
ered to be significant (see paragraphs 2. and 3., below).

In support of the use of performance standards and professional judgment and to reduce regulatory burden, IACUC-reviewed and -approved policies (e.g., guidance documents, standard operating procedures, drug formularies) for the conduct of animal activities may be used for the administrative handling of some significant changes according to the following considerations:

1. Significant changes described in 1.a.-g., below, must be approved by one of the valid IACUC approval methods described in the PHS Policy IV.C.2., that is FCR or DMR, including changes:
   a. from nonsurvival to survival surgery;
   b. resulting in greater pain, distress, or degree of invasiveness;
   c. in housing and or use of animals in a location that is not part of the animal program overseen by the IACUC;
   d. in species;
   e. in study objectives;
   f. in Principal Investigator (PI); and
   g. that impact personnel safety.

2. The specific significant changes described in 2.a.-c., below, may be handled administratively according to IACUC-reviewed and -approved policies in consultation with a veterinarian authorized by the IACUC. The veterinarian is not conducting DMR, but is serving as a subject matter expert to verify that compliance with the IACUC-reviewed and -approved policy is appropriate for the animals in this circumstance. Consultation with the veterinarian must be documented. The veterinarian may refer any request to the IACUC for review for any reason and must refer any request that does not meet the parameters of the IACUC-reviewed and -approved policies. This includes changes in:
   a. anesthesia, analgesia, sedation, or experimental substances;
   b. euthanasia to any method approved in the AVMA Guidelines for the Euthanasia of Animals; and
   c. duration, frequency, type, or number of procedures performed on an animal.

3. A significant change that may be handled administratively according to an existing IACUC-reviewed and -approved policy without additional consultation or notification is an increase in previously approved animal numbers (PHS Policy IV.D.1.a.).

Other Changes

4. Changes that may be handled administratively without IACUC-approved policies, consultations, or notifications include:
   a. correction of typographical errors;
b. correction of grammar;
c. contact information updates; and
d. change in personnel, other than the PI. (There must be an administrative review to ensure that all such personnel are appropriately identified, adequately trained and qualified, enrolled in occupational health and safety programs, and meet other criteria as required by the IACUC.)

5. Investigators may use fewer animals than approved. This does not require IACUC approval, notification, consultation, or administrative handling.

The USDA Animal and Plant Health Inspection Service has reviewed and concurs with the guidance provided in this Notice.

Inquiries
For questions or further information, contact:
Office of Laboratory Animal Welfare (OLAW)
Office of Extramural Research
National Institutes of Health
Telephone: 301-496-7163
Email: olaw@od.nih.gov
See more at: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-126.html#sthash.a3o1Rfa5.dpuf
\section*{1520.8 Summary of NPRM for Revisions to the Common Rule$^1$}
Department of Health and Human Services

The U.S. Department of Health and Human Services and fifteen other Federal Departments and Agencies have announced proposed revisions to modernize, strengthen, and make more effective the Federal Policy for the Protection of Human Subjects that was promulgated as a Common Rule in 1991. A Notice of Proposed Rulemaking (NPRM) was published in the Federal Register on September 8, 2015 (PDF 1063 KB). The NPRM seeks comment on proposals to better protect human subjects involved in research, while facilitating valuable research and reducing burden, delay, and ambiguity for investigators.

Some of the major changes being proposed that will better protect research subjects and help build public trust are the rules relating to informed consent. With regard to informed consent in general (such as consent to participating in clinical trials), the rules would be significantly tightened to make sure that the process becomes more meaningful. Consent forms would no longer be able to be unduly long documents, with the most important information often buried and hard to find. They would need to give appropriate details about the research that is most relevant to a person’s decision to participate in the study, such as information a reasonable person would want to know, and present that information in a way that highlights the key information. In addition, to assure that these rules do indeed change current practices, there will be a one-time posting requirement for the consent forms for clinical trials, so that anyone drafting a consent form will do so knowing that it will eventually be subject to public scrutiny.

In addition, informed consent would generally be required for secondary research with a biospecimen (for example, part of a blood sample that is left over after being drawn for clinical purposes), even if the investigator is not being given information that would enable him or her to identify whose biospecimen it is. Such consent would not need to be obtained for each specific research use of the biospecimen, but rather could be obtained using a “broad” consent form in which a person would give consent to future unspecified research uses.

The NPRM also attempts to strengthen the effectiveness and efficiency of the oversight system by making the level of review more proportional to the seriousness of the harm or danger to be avoided. Research that poses greater risk to subjects should receive more oversight and deliberation than less risky research. The NPRM seeks to avoid requirements that do not enhance protection and impose burden, which can decrease efficiency, waste resources, erode trust, and obscure the true ethical challenges that require careful deliberation and stakeholder input. Cumbersome and outdated regulatory standards overwhelm and distract institutions, IRBs, and investigators in ways that stymie efforts to appropriately address the real risks and benefits of research.

The result of these types of changes, as the NPRM proposes to implement them,

$^1$ Retrieved from http://www.hhs.gov/ohrp/humansubjects/regulations/nprmhome.html
is that some studies that currently require IRB review would now become exempt. Some that are currently exempt would specifically be declared as outside the scope of the regulations (“excluded”), and thus would not require any administrative or IRB review. Further, in terms of determining when a study is exempt, a web-based “decision tool” will be created. That decision tool will provide a determination of whether or not a study is exempt. That result, so long as the tool was provided with accurate information, will be presumed by the Common Rule agencies to be an appropriate determination of exempt status. It is expected that in many instances the tool would be used by the investigators themselves, thus obviating both the need for further review and the concern that the institution might be subjecting itself to future liability by allowing investigators to use the tool. For all of the excluded and exempt research activities, this NPRM also affirms the importance of applying the ethical principle of respect for persons, in addition to the importance of abiding by this principle in fully regulated non-exempt research involving human subjects.

The following list encompasses the most significant changes to the Common Rule proposed in the NPRM:

1. Improve informed consent by increasing transparency and by imposing stricter new requirements regarding the information that must be given to prospective subjects, and the manner in which it is given to them, to better assure that subjects are appropriately informed before they decide to enroll in a research study.

2. Generally require informed consent for the use of stored biospecimens in secondary research (for example, part of a blood sample that is left over after being drawn for clinical purposes), even if the investigator is not being given information that would enable him or her to identify whose biospecimen it is. That consent would generally be obtained by means of broad consent (i.e., consent for future, unspecified research studies) to the storage and eventual research use of biospecimens.

3. Exclude from coverage under the Common Rule certain categories of activities that should be deemed not to be research, are inherently low risk, or where protections similar to those usually provided by IRB review are separately mandated.

4. Add additional categories of exempt research to accommodate changes in the scientific landscape and to better calibrate the level of review to the level of risk involved in the research. A new process would allow studies to be determined to be exempt without requiring any administrative or IRB review. Certain exempt and all non-exempt research would be required to provide privacy safeguards for biospecimens and identifiable private information. New categories include:

   a. certain research involving benign interventions with adult subjects;

   b. research involving educational tests, surveys, interviews or observations of public behavior when sensitive information may be collected, provided that data security and information privacy protections policies are followed;
c. secondary research use of identifiable private information originally collected as part of a non-research activity, where notice of such possible use was given;

d. storing or maintaining biospecimens and identifiable private information for future, unspecified secondary research studies, or conducting such studies, when a broad consent template to be promulgated by the Secretary of HHS is used, information and biospecimen privacy safeguards are followed, and limited IRB approval of the consent process used is obtained.

5. Change the conditions and requirements for waiver or alteration of consent such that waiver of consent for research involving biospecimens (regardless of identifiability) will occur only in very rare circumstances.

6. Mandate that U.S. institutions engaged in cooperative research rely on a single IRB for that portion of the research that takes place within the United States, with certain exceptions. To encourage the use of IRBs that are otherwise not affiliated with or operated by an assurance-holding institution (“unaffiliated IRBs”), this NPRM also includes a proposal that would hold such IRBs directly responsible for compliance with the Common Rule.

7. Eliminate the continuing review requirement for studies that undergo expedited review and for studies that have completed study interventions and are merely analyzing data or involve only observational follow-up in conjunction with standard clinical care.

8. Extend the scope of the policy to cover all clinical trials, regardless of funding source, conducted at a U.S. institution that receives federal funding for non-exempt human subjects research.

In sum, the proposed modifications described above are designed to continue to uphold the ethical principles upon which the Common Rule is based, as applied to the current social, cultural, and technological environment.
NIH Human Subjects Protection Training Requirements FAQs

National Institutes for Health

Frequently Asked Questions on Requirements for Education

A. Who Must Comply with the Policy

Who needs to receive required education on the protection of human subjects?

Individuals who will be involved in the design or conduct of NIH-funded human subjects research must fulfill the education requirement. These individuals are considered to be “Key Personnel” on NIH awards and contracts that include research involving human subjects, this includes the Principal Investigator(s), all individuals responsible for the design or conduct of the study, and those individuals identified as key personnel of consortium participants or alternate performance sites.

Does the education requirement apply to awards that do not involve human subjects?

No, but it is important for all investigators, even those working with tissues or specimens derived from human sources to understand when proposed research triggers regulatory and policy requirements.

Human subject as defined in 45 CFR part 46 means a living individual about whom an investigator (whether professional or student) conducting research obtains: (1) data through intervention or interaction with the individual, or (2) identifiable private information.

Research using human specimens, tissues, or data that are unidentifiable may not be considered human subjects research. See: http://www.hhs.gov/ohrp/policy/cdebiol.pdf.

Investigators who conduct studies with human specimens, tissues, or data that are determined not to involve human subjects are not required to fulfill the education requirement

Are investigators involved in human subjects research that is described by one or more of the exemptions in 45CFR46 required to comply with the education requirement?

Yes. Investigators who conduct human subjects research that is exempt from Institutional Review Board (IRB) review and approval (six exempt categories defined in 45 CFR part 46.101(b)) must comply with the education requirement.

NOTE: From September, 2002 through March 9, 2005 NIH investigators conducting human subjects research meeting the criteria for Exemption 4 in the HHS regulations did not provide documentation of training. Effective January 10, 2005 all new, competing applications will require documentation of completion of the educational requirement for each investigator involved in the design and conduct of NIH-funded human subjects research prior to award (coincident with NIH imple-
mentation of the OHRP Guidance on Research Involving Coded Private Information or Biological Specimens, available at http://www.hhs.gov/ohrp/policy/cdebio.pdf. As stated above, the requirement applies both to human subjects research and exempt human subjects research.

Does the education requirement apply to new Key Personnel involved in human subjects research whose names are added on non-competing Progress Reports?

Yes. NIH expects that all Key Personnel will receive the required education before beginning research involving human subjects. If Key Personnel are added to an award in a non-competing year, documentation that they have received the required education should be included in the non-competing Progress Report.

Do individuals identified as Key Personnel who are not involved in the design and conduct of the human subjects portion of an award need to comply with the education requirement?

No. Investigators who are identified as Key Personnel, but are not involved in the design and conduct of human subjects research do not need to comply with this requirement. For example, those involved solely in the analysis of de-identified data.

Does the education requirement apply to Key Personnel involved in human subjects research supported by an NIH award if they will not be compensated by the award?

Yes. The education requirement applies to all individuals involved in the design and conduct of human subjects research supported by an NIH award whether or not they receive compensation from the award.

Do Key Personnel on foreign awards or on foreign subcontracts have to comply with the education requirement?

Yes. The education requirement applies to all investigators involved in the design or conduct of research involving human, including foreign awards and subcontracts. Foreign certification and documentation of the required education in languages other than English are acceptable.

If the grantee organization has difficulty obtaining documentation that Key Personnel on foreign subcontracts have received the required education, NIH staff may consider issuing awards that restrict third party participation until this documentation is provided to NIH. This will streamline issuing awards in situations where third party participation is not essential to the start of the project. See the September 5, 2001 NIH Guide Notice for additional information.

Do third party (subcontract) Key Personnel or consultants need to comply with the education requirement?

Yes. Third party Key Personnel and consultants must comply with the education requirement if they are involved in the design and conduct of research involving human subjects.
B. Human Subjects Protections Education Programs

Does NIH specify which educational programs should be used to fulfill the protection of human subjects education requirement?

No. The NIH does not endorse any specific educational programs. We believe that institutions are in the best position to determine what programs are appropriate for fulfilling the education requirement. Institutions may require a particular program or may choose to develop a program to meet the requirement.

As a public service, the NIH Office of Extramural Research offers a free tutorial on “Protecting Human Research Participants” that institutions may elect to use to meet the human subjects protections education requirement.

If the NIH tutorial “Protecting Human Research Participants” is taken to meet the education requirement, will NIH provide copies of the certificate of completion?

No. After completing the training module, the trainee may print out a certificate of completion that may be provided as documentation of compliance with the requirement. Should another copy of the certificate be required, the trainee may log in to the tutorial at any time to print the certificate associated with his or her account. NIH does not provide additional copies of the certificate.

How often do investigators involved in the design and conduct of human subjects research need to complete the education?

The NIH policy is silent on the frequency of education. The intent of the education requirement is for investigators to keep abreast of development in human subjects protection. We believe that institutions are in the best position to determine when renewed or additional education is warranted.


C. Award Mechanisms

Does the education requirement apply to Research and Development contract awards?

Yes. The education requirement applies to Research and Development Contract awards that include human subjects research. The contracting officer will request documentation that all Key Personnel involved in human subjects research have received the required education prior to the award of a new contract.

Does the education requirement apply to NRSA research fellowship awards?

Yes. The education requirement applies to individual fellowship applications that describe human subjects research. For individual fellows, the Institute/Center that will be funding the fellowship application will request the necessary information prior to issuing the award (Just-In-Time).

Does the education requirement apply to NRSA training grants?
Trainees on NRSA training grants are required to receive training in the responsible conduct of research (RCR), which may include the protection of human subjects as a topic. Trainees involved in the design or conduct of human subjects research only need to provide additional documentation of having received the required human subjects education if their required RCR training does not include the protection of human subjects as a topic.

Does the education requirement apply to responses to RFPs, RFAs and PAs as well as to investigator initiated grant applications?

Yes. The education requirement applies to all NIH awards that include human subjects research.

D. Documentation

When, in the award process, should documentation of the required human subjects education be provided to NIH?

The Institute/Center that would be funding the project will request documentation that all Key Personnel have received the required education prior to issuing the award. The information should be submitted to your Grants Management Official with other Just-In-Time requirements and must contain the signature of an authorized institutional official.

Will an award be delayed until documentation of completion of the required education is provided?

Yes. The award may be delayed in its entirety or NIH Staff may choose to issue an award restricting all human subjects research until documentation of completion of the education requirement has been received. If problems are encountered investigators should contact the program official or grants management specialist. Contractors and prospective contractors should consult with the project officer or contract officer.

Does the documentation that the required education has been received need to be a part of the document signed by an institutional official?

Yes. The documentation must be signed by an institutional official. It is, however, not required that the Principal Investigator also sign the documentation (see the September 5, 2001 NIH Guide Notice).

Do Key Personnel who have already submitted documentation of having received the required education for one award need to re-submit the documentation when involved in human subjects research supported by another award?

Yes. Individuals involved in the design and conduct of human subjects research supported by more than one award must provide certification that they have received the required education once for each award.

Can the same certificate of completion of the human subjects education be used on more than
one application or contract proposal?
Yes. The same certificate may be submitted to NIH to fulfill the human subjects education requirement for multiple applications and proposals.

How frequently do Key Personnel need to provide documentation of having received the required education?
Key Personnel only need to provide this documentation once for each competing award.

If new Key Personnel involved in human subjects research are included in a non-competing Progress Report, does documentation of their compliance with the education requirement need to be provided?
Yes. Documentation of compliance with the education requirement must be provided for all Key Personnel involved in human subjects research once for each competing award. If Key Personnel are added to an award in a non-competing year, documentation that they have received the required education should be included in the next non-competing Progress Report.
1520.10 NIH Policy on the Use of a Single Institutional Review Board for Multi-Site Research

National Institutes of Health

Notice Number: NOT-OD-16-094

Key Dates

Release Date: June 21, 2016
Effective Date: May 25, 2017

Related Announcements
NOT-OD-16-109

Issued by
National Institutes of Health (NIH)

Purpose

The National Institutes of Health (NIH) is issuing this policy on the use of a single Institutional Review Board (IRB) for multi-site research to establish the expectation that a single IRB (sIRB) of record will be used in the ethical review of non-exempt human subjects research protocols funded by the NIH that are carried out at more than one site in the United States. The goal of this policy is to enhance and streamline the IRB review process in the context of multi-site research so that research can proceed as effectively and expeditiously as possible. Eliminating duplicative IRB review is expected to reduce unnecessary administrative burdens and systemic inefficiencies without diminishing human subjects protections. The shift in workload away from conducting redundant reviews is also expected to allow IRBs to concentrate more time and attention on the review of single site protocols, thereby enhancing research oversight.

Background


Overview of the Public Comments

In general, most of the comments that were submitted on the draft policy were
supportive of NIH’s goal of enhancing and streamlining IRB review in multi-site research. Commenters, especially individual researchers, scientific and professional societies, and patient advocacy organizations, generally agreed that the use of a single IRB for multi-site studies involving the same protocol would help streamline IRB review and would not undermine and might even enhance protections for research participants. Most of the comments also favored the approach the NIH proposed to promote the use of single IRBs by making reliance on an sIRB an expectation for all non-exempt multi-site studies carried out at U.S. sites. At the same time, a number of commenters, mainly academic institutions and organizations representing them, did not agree with the scope of the proposed policy or that it should become a term and condition of funding, and suggested the NIH incentivize, not mandate, reliance on an sIRB.

Comments from researchers that supported the draft policy described unnecessary delays and additional costs caused by duplicative IRB reviews. They noted that IRB submission requirements at each site differ and take time to navigate and manage. They also indicated that review of the same protocol by multiple IRBs can sometimes lead to protocol and consent document changes that can introduce inconsistencies in the execution of the protocol across sites, lead to enrollment imbalances, and skew the analysis of the aggregated data. More often, however, multiple IRB reviews result in changes to consent documents that are merely stylistic and not substantive, or changes that focus on institutional interests (e.g., liability management) rather than human research protections. Commenters raised the concern that the current practice of requiring multiple IRB reviews may actually contribute to some researchers’ reluctance to participate in rigorous, multi-site research and may incentivize smaller and simpler study designs.

Scientific and professional societies generally favored the proposed policy. These stakeholders stated that the policy would decrease administrative burdens on clinical research staff, speed up participant recruitment, and streamline the research process and that these changes would result in enhancements to the efficiency of research and acceleration of research progress. They also suggested that the benefits of such a policy include enhanced adverse event monitoring and improvements to the quality and consistency of IRB reviews.

Most of the comments from patient advocacy groups and participant representatives were supportive of the proposed policy. These stakeholders pointed out that greater use of single IRBs will lead to enhanced protections through increased accountability and improved efficiency.

In general, comments from academic institutions, IRBs, and organizations that represent them cited concerns about the proposed policy, even though many also expressed support for its goal and agreed it could have a positive impact in reducing research review and initiation time to the study. These stakeholders suggested that the scope of the proposed policy is too broad and that the NIH should not make the policy a term and condition of award. They said that decisions about whether to use a single IRB should be voluntary and that the NIH should offer incentives to promote change. For example, they suggested that the NIH encourage investiga-
tors and institutions to use single IRBs in grant applications by providing additional funding to those grants that agree to use a single IRB. Some suggested that before issuing a broad policy, the NIH should pilot and evaluate a narrower use of single IRBs and provide appropriate resources to support the participating awardees. Others suggested that the NIH should fund research on existing central IRB models to evaluate potential benefits and costs before mandating single IRB review. A few commenters raised concerns about the timing of the policy in relation to the revisions of the Common Rule, stating their preference that the NIH not adopt a single IRB policy until Common Rule revisions have been finalized. However, other commenters praised the NIH for addressing the single IRB issue in the absence of an updated Common Rule. Finally, a few commenters discussed how the policy could be harmonized with other federal policies. One commenter recommended that the Office for Human Research Protections (OHRP) in the Department of Health and Human Services (HHS) provide guidance to support the policy’s stance on duplicative IRB review.

Stakeholders from academic institutions were concerned that the membership of any given sIRB would not be able to achieve the level of local support for a particular research study or its acceptability in terms of all the participating sites’ institutional commitments and regulations, applicable laws, and standards of professional conduct and practice. Some commenters contended that only a local IRB is able to understand the specific protections required for a vulnerable population that comprises their research participant base. Some suggested that site-specific practices for recruitment and retention, especially for vulnerable populations, would pose challenges for an sIRB. A number of commenters stated that their institutional IRBs are in the best position to know and understand competencies of and potential conflicts of interest of specific investigators. Others stressed the importance of the relationship between an investigator and the local IRB and noted that IRB members can serve as mentors to investigators whose protocols they oversee.

Some commenters asserted that the proposed policy does not recognize the time and effort needed to identify and establish a single IRB of record, including negotiating and executing authorization agreements and standard operating procedures, conducting study initiation meetings, creating account activities, and modifying information technology (IT) systems. They suggested that the policy would result in the formation of hundreds of different “single IRBs of record” with which institutions and investigators will need to interact. Some questioned whether an sIRB would be equipped to ensure local compliance at a relying institution and expressed the concern that a compliance problem for an sIRB would lead to compliance actions against the sites relying on that sIRB. Several commenters who supported the use of sIRBs recommended that rather than having participating sites identify a single IRB for each protocol, the NIH should establish a central IRB to review all multi-site research studies, akin to the National Cancer Institute’s Central Institutional Review Board (CIRB). They suggested that this approach would create an even “playing field” for every institution, big or small, regardless of whether their own IRB has the resources to act as a single IRB of record.
Many commenters, regardless of whether or not they supported the proposed policy, noted that over the past several decades, the IRB’s role has been expanded to include functions that go beyond ethical review of proposed research. For example, IRBs are often responsible for reviewing compliance with institutional policies, such as conflict of interest and investigator training. Commenters in favor of the proposed policy thought that greater use of sIRBs would help to return sIRB review to its primary mission of ensuring appropriate protections for human subjects rather than protecting the institution from legal liability or damage to its reputation. They also suggested that when institutions rely on a single IRB of record for multi-site research studies, IRB responsibilities are clearer, which helps institutions to develop policies and to provide resources beyond IRB review (e.g., human research protections experts) to facilitate compliance with the institutional human research protections program. Some commenters opposed to the proposed Policy suggested that the ancillary responsibilities of IRBs are so intertwined with the research oversight responsibilities that using a sIRB would disrupt the existing system of “checks and balances” at institutions. They also argued that the opportunity for the IRB to recommend protocol changes for reasons unrelated to ethical review (e.g., scientific improvements, changes to study design) would be lost.

Many commenters, regardless of whether they supported or opposed the proposed policy, made a number of specific practical suggestions about implementation. These are summarized below.

**Applicability**

Most commenters supported a broad application of the policy to all studies involving the same protocol carried out at multiple sites in the U.S. These stakeholders stated that use of a single IRB of record for all types of studies and populations and study arrangements would encourage standardization of clinical research protocols and more effective implementation of protocols and protocol amendments. In contrast, a number of commenters suggested that the NIH should narrow the application of the policy or phase it in over time. Ideas about how the applicability of the policy should be narrowed were wide-ranging. Some stakeholders suggested that the level of risk should be a consideration in whether the policy should apply, with some pointing to minimal risk research and others to research involving more than minimal risk as being more appropriate for single IRB review. Others suggested that the policy should apply only to multi-site studies that involve a large number of sites (e.g., greater than 10); only to research involving clinical trials; only to studies carried out within established cooperative groups; or only to lengthy studies requiring an extended period of IRB oversight, e.g., three years or more. Some commenters suggested that the applicability of the policy remain broad, but that it be phased in over time.

**Exceptions**

The draft policy proposed exceptions only if the designated single IRB of record is unable to meet the needs of specific populations or where local IRB review is required by federal, tribal, or state laws or regulations. Most commenters agreed
that there was a need to allow for exceptions to the uses of a single IRB. There were
a number of comments calling for additional exceptions to those proposed in the
policy. Commenters who generally supported the proposed policy stated that
exceptions should be very limited. Some were concerned that a determination that
the sIRB would be unable to meet the needs of specific populations was an overly
subjective criterion or that institutions would routinely request exceptions asserting
that the needs of specific populations could only be met by local IRBs. Tribal Nation
commenters pointed to the importance of firsthand knowledge of local tribal cus-
toms, cultural values, and tribal sensitivities and supported exceptions to address
those needs and also as a way of respecting tribal sovereignty. Other commenters
said that the policy should allow for situational exceptions, depending on the types
and complexity of studies and study teams, types and numbers of involved institu-
tions, resources available for the sIRB (including IT resources), available resources
for investigators, accreditation status of the human research protection program, or
when study sites have concerns regarding the constitution of the designated review-
ing IRB, that IRBs’ experience reviewing a particular type of research was inade-
quate, or if relying on the single IRB would affect the institutional IRB’s accredita-
tion status.

Assuring Consideration of Local Context
Commenters were divided about the extent to which individual sites’ local con-
texts would present a challenge for an sIRB. Some commenters suggested that in
today’s highly interconnected world, local contexts would not be unique or differ-
ent enough to affect the review of research protocols. Others suggested that local
context does vary, not only from state to state and community to community, but
even among institutions serving the same community.

Commenters identified a number of capabilities that the sIRB would need to
have in order to be effective, and one comment identified four such capabilities:

◆ Knowledge of state law and local standards relevant to human subject research,
e.g., age of majority and assent laws, mandatory reporting, data security, and
awareness of differences in laws that would affect research conducted at sites in
multiple states.

◆ Systems and procedures for collecting information from participating sites
in order to ascertain whether the research could feasibly be carried out at
the site. The sIRB would need to consider the number of competing studies
underway, limits to participant pools, and whether the site had the capabilities
and resources to execute research studies. Resources for consideration would
include space, equipment, drug/device storage, handling, and dispensing,
data storage capacities, and personnel, needed to support the research.
Institutional capabilities would include policies on issues such as confidentiality,
contraception, compensation for injury, or contacts who can answer research
subjects’ questions.

◆ Mechanisms in place to assess the experience and qualifications of site
investigators and study staff, including whether they are in good standing with
state board and other licensing authorities and have a good record of compliance with all laws and regulations. Other factors to be considered in this assessment would include financial conflicts of interest, research workload, and training in research ethics and the responsible conduct of research.

◆ Mechanisms for obtaining supplemental information when research would involve sensitive topics or when research would require the participation of discrete and insular communities. In some cases, the sIRB might need community-related information and demographic data including, but not limited to, race/ethnicity, religious affiliation, and language.

Selection of the IRB of Record

A number of commenters called on NIH to establish criteria or a minimum set of requirements to assist in the selection of the sIRB, as well as a need for criteria for an sIRB to use in its evaluation of participating sites. One commenter suggested that NIH’s Policy should require the applicant, offeror, or intramural investigator to justify their proposed sIRB. Since the NIH funding Institute or Center (IC) must approve the sIRB, one commenter suggested that NIH describe the criteria to be used in making a determination that the proposed sIRB is acceptable.

Some commenters offered specific suggestions for sIRB evaluation criteria. Suggestions for evaluation criteria included the following:

◆ Evidence of a commitment to the highest ethical standards and ability to meet rigorous standards for quality and protection of research participants, e.g., through accreditation or assessment of policies, procedures, and practices;

◆ Ability to meet regulatory requirements;

◆ Well-established track record of compliance and performing high quality reviews, e.g., no regulatory errors or failures to address Common Rule regulatory requirements or Food and Drug Administration regulations;

◆ Appropriate expertise and experience to review the proposed research and the capacity to review the study protocol and participating sites;

◆ Recognition of the importance of building trust across all sites;

◆ Capacity to develop and maintain the respect and trust of the research participants and the communities in which the research is performed;

◆ Willingness and ability to serve as a Privacy Board to fulfill the requirements of the Health Insurance Portability and Accountability Act (HIPAA) Privacy Rule for use or disclosure of protected health information for research;

◆ Adherence to communication standards and a commitment to transparency through sharing information about the review process, e.g., meeting minutes, approval status;

◆ Adequate institutional infrastructure and support, and evidence of quality and robustness of the institution’s human research protection program;

◆ Sufficient staff to handle communications between all sites for initial review,
continuing review, adverse events, amendments, etc.;
◆ Available interoperable information technology resources to facilitate communication and exchange of information between the participating institutions;
◆ Sufficient resources to negotiate and track authorization agreements;
◆ Ability to account for the IRB costs for review and management and how those costs will be met;
◆ Adequate processes in place and administrative support to handle additional review responsibilities;
◆ Adequate processes in place and administrative support to handle additional review responsibilities;

Defining IRB and Institutional Responsibilities

Many commenters pointed out the importance of defining the sIRB’s role and scope of responsibility in relation to the responsibilities of the participating research sites. These commenters noted that responsibilities of IRBs defined by the 45 CFR 46 often constitute only one part of institutions’ overall human research protections program. Commenters called on the NIH to establish a common approach to the division of responsibilities by providing model authorization agreements or even a uniform agreement that should be used in all cases. In addition to helping ensure a well-functioning review process, clear roles and responsibilities would, some suggested, also help mitigate concerns about added liability that an sIRB might assume.

A range of views were expressed relating to responsibilities that would be assumed by the sIRB and those that would remain with participating sites. Some commenters suggested that in addition to fulfilling the requirements set out in 45 CFR 46, i.e., conducting initial and continuing reviews of protocols, amendments, unanticipated problems, protocol deviations, and required regulatory IRB reporting, sIRBs should adopt some of the responsibilities that are frequently delegated to local IRBs, in particular, acting as a privacy board for all sites. One commenter noted that systems would be required to ensure that duplicative reviews are not conducted by the sIRB and local IRBs, and several commenters expressed concerns about the difficulty of coordinating required sIRB reviews with additional reviews that are not required by regulation, such as reviews for conflict of interest, investigator qualifications, and scientific merit. Some of these commenters questioned how sIRB reviews required by the HHS regulations should be coordinated with other required reviews that may have been delegated to the local IRB. These commenters noted that many institutions have established systems and standard operating procedures for coordinating local IRB review with other required reviews, such as institutional biosafety reviews, radiation safety reviews, pharmacy reviews, reviews required by state or local laws, post-approval monitoring and for-cause auditing purposes, and research billing. One commenter suggested that sIRBs should not be responsible for adverse event reporting. Another commenter suggested that sIRBs should be responsible for maintaining databases of relevant state laws. In addition,
a small number of commenters indicated that the regulations of other Common Rule agencies, FDA in particular, may create contradictory requirements, and called for clarification and a more unified approach.

Several commenters stated that coordinating these additional reviews with sIRB reviews would limit the gains in efficiency realized from reliance on an sIRB. One commenter recommended that the NIH develop a template IRB authorization agreement and guidelines to define the institutional obligations that are distinct from the IRB review responsibilities. Another commenter recommended that the NIH publish guidance delineating the specific regulatory requirements for which the sIRB would be responsible, shared responsibilities, and responsibilities that an sIRB could negotiate with IRBs at participating sites.

**Resources and Funding**

Several commenters described the proposed policy as an unfunded mandate, or stated that it would result in a shifting of expenses from one institution to another. Many commenters expressed the concern that if costs associated with using a single IRB are taken from a participating institution’s indirect costs, there would be insufficient funds for the local Human Research Protection Program (HRPP) that still has institutional oversight responsibilities, even if the IRB of record is external. Most commenters with experience using a single IRB of record for multi-site research studies recommended that indirect costs remain unchanged for relying institutions in order to ensure that the human research protections infrastructure are available for institutional responsibilities, e.g., post-approval compliance monitoring, conflict of interest reviews. Many commenters noted funding sIRBs through indirect costs would divert funds required to conduct research and serve as a disincentive to conducting multisite research. The majority of commenters stated a preference for including the additional costs associated with a single IRB review in the study budget as direct cost, although one commenter stated a preference that sIRB review be included as an indirect cost in order to maximize the amount of funding available for research.

Several commenters stated that the costs and resources needed to establish sIRBs were not addressed by the proposed policy. Infrastructure needs noted by these commenters included additional staff and/or staff time to perform sIRB-related activities, costs to create or adapt electronic managements systems that are interoperable with outside institutions, and the time and cost of developing communication tools to link investigators to IRBs outside their institution. Other commenters familiar with the operations and use of sIRBs noted that while initial financial support from the NIH may be required to establish or expand the capacity of some IRBs to serve as the IRB of record, most sIRBs should be able to become self-supporting eventually.

Commenters had questions about whether plans for single IRB review would be required in grant applications and how plans would be reviewed.
Need for Implementation Guidance

A number of commenters pointed out how important it would be for the NIH to provide practical guidance to facilitate the implementation of the policy, with some commenters stating that, in the absence of such guidance, burden and costs would only shift between institutions rather than adding efficiency to the IRB process. A few commenters noted that this guidance could be developed using the experiences of IRBs that have already implemented centralized IRB review processes.

In addition to general requests for implementation guidance, a number of commenters made specific guidance suggestions. These suggestions included the need for guidance covering:

♦ The specific criteria to use for evaluation of IRBs of record when selecting a single IRB for a multisite study;

♦ The process for determining roles and responsibilities of the sIRB versus IRBs of participating research sites and a standard authorization agreement template that specifies these roles and responsibilities. One commenter recommended that this guidance clearly define who is responsible for ensuring investigator compliance, while another recommended that this guidance cover review of modifications to approved research, addition of research sites, and other post-approval monitoring issues including the relationship between the IRB and a data monitoring committee (such as a data and safety monitoring board). A number of commenters asked the NIH to provide guidance about liability as part of this guidance;

♦ Processes for local IRBs working with an sIRB, including what types of reviews will be performed by the local IRB (radiation safety review, pharmacy review, conflicts of interest) and best practices for maintaining oversight of research reviewed and approved by a non-institutional IRB. Additionally, one commenter requested that NIH encourage and provide guidance for institutional review of the impact the sIRB will have on the institution’s HRPP business goals, policies, accreditation status, tracking and management processes;

♦ Consent forms, including the process of consent approval by the sIRB and participating sites, and whether and how local institutions could alter an sIRB informed consent document to fit local needs;

♦ Plans to ensure quality and processes for institutions relying on an sIRB to question or appeal sIRB decisions, and to address and resolve issues arising from duplicate reviews.

In addition, commenters requested:

♦ Guidance and tools to enable sIRBs to consider local context issues. Specific guidance was requested on the process by which sIRBs would collect local information (e.g., through a standard form or through an ad hoc member or consultant with local context knowledge), and what types of information should be provided to sIRBs (e.g., how to apply state and local laws). One commenter also recommended that the NIH develop a set of guidelines for how the sIRB
would apply local standards, knowledge of institutional policies, institutional capacity issues, investigator and study staff qualifications, and local community and subject considerations to their reviews;

◆ An explanation of costs associated with development and maintenance of sIRBs and guidance on how the use of an sIRB should be proposed at the grant level, including a fee structure to help investigators incorporate sIRB review into their budgets;

◆ A more detailed description of the standards for permitting exceptions for sIRB review;

◆ A description of what resources, if any, NIH would make available to assist in training IRBs and researchers regarding single IRB review.

◆ Some of the commenters who requested guidance recommended that any NIH guidance on sIRBs be released along with or prior to the issuance of the final Policy.

Implementation of the Policy

In developing the final policy set out below, the NIH carefully considered the many thoughtful comments we received on the Draft NIH Policy on the Use of a Single Institutional Review Board (IRB) for Multi-Site Research (NOT-OD-15-026). While we found no compelling reason to narrow the essential scope of the final policy—it will cover all domestic sites of NIH-funded non-exempt multi-site studies as was proposed—we have clarified the policy intent and modified several provisions. The final policy is intended to apply only to studies where the same research protocol is being conducted at more than one site; it does not apply to studies that involve more than one site but the sites have different roles in carrying out the research. Applicants/offerors will be expected to submit a plan identifying the sIRB that will serve as the IRB of record for all study sites. It will be the responsibility of the applicant/offeror to assure that the sIRB is qualified to serve; the applicant’s plan will not be evaluated in peer review. The additional costs associated with sIRB review may be charged to grants or contracts as direct costs, provided that such costs are well-justified and consistently treated as either direct or indirect costs according to applicable cost principles in the NIH Grants Policy Statement and the FAR 31.202 (Direct Costs) and FAR 31.203 (Indirect Costs). Exceptions to the policy will be granted, as was proposed, if the use of an sIRB is prohibited by federal, state, or tribal laws or regulations. We will also grant exceptions where the federal, state, or tribal prohibition on the use of an sIRB is established by policy, and we will consider granting an exception if a request is made and a compelling justification provided for why an exception is needed. Such justifications could be for reasons other than that the sIRB is unable to meet the needs of a specific population, as was proposed in the draft policy. The final policy also clarifies that multi-site studies within ongoing, non-competing awards will not be expected to comply with the policy until a competing renewal application is submitted.

The NIH recognizes that the policy will begin a paradigm shift in IRB review.
As such, the final policy will not take effect until May 25, 2017. In the interim, the NIH will issue guidance and provide resources to assist awardees in adapting to the shift.

Guidance on how costs associated with sIRBs may be charged as direct versus indirect costs can be found in Guide Notice NOT-OD-16-109. Other guidance materials will be issued before the policy’s effective date and posted along with the policy on the following site: http://osp.od.nih.gov/office-clinical-research-and-bioethics-policy/clinical-research-policy/models-irb-review. Among other topics, the guidance will address:

- How costs associated with sIRBs may be charged as direct versus indirect costs;
- Considerations in the selection of the sIRB;
- The content of the sIRB plan that must be submitted with applications and proposals;
- Process for applicants/offerees to submit a request for an exception and process for NIH review of the request for exception;
- Roles and responsibilities of the sIRB and participating sites;
- Model authorization agreement that lays out the roles and responsibilities of each signatory;
- Models for gathering and evaluating information from all the reliant sites about community attitudes and the acceptability of proposed research;
- A model communication plan that identifies when and which documents are to be completed and shared with those involved so each may fulfill their responsibilities.

Finally, while the NIH anticipates that there will be challenges associated with implementation, we expect these to be short-lived. Once the transition to the new way of operating is made, the benefits of widespread use of sIRBs will outweigh any costs and, ultimately, reduce burdens to the research process. At the same time, the NIH will also closely monitor the implementation of the policy, consider its impact on research such as improvements in time to initiation of research and reduction of unnecessary burden, and be vigilant about any diminution in the protection of human subjects.

National Institutes of Health Policy on the Use of a Single Institutional Review Board for Multi-Site Research


Purpose

The National Institutes of Health (NIH) Policy on the Use of a Single Institutional Review Board for Multi-Site Research establishes the expectation that all sites participating in multi-site studies involving non-exempt human subjects research funded by the National Institutes of Health (NIH) will use a single Insti-
tutional Review Board (sIRB) to conduct the ethical review required by the Department of Health and Human Services regulations for the Protection of Human Subjects at 45 CFR Part 46. This policy, which is consistent with 45 CFR Part 46.114, is intended to enhance and streamline the process of IRB review and reduce inefficiencies so that research can proceed as expeditiously as possible without compromising ethical principles and protections for human research participants.

Scope and Applicability
This policy applies to the domestic sites of NIH-funded multi-site studies where each site will conduct the same protocol involving non-exempt human subjects research, whether supported through grants, cooperative agreements, contracts, or the NIH Intramural Research Program. It does not apply to career development, research training or fellowship awards.

This policy applies to domestic awardees and participating domestic sites. Foreign sites participating in NIH-funded, multi-site studies will not be expected to follow this policy.

Consistent with the Roles and Responsibilities section, applicants/offerors will be expected to include a plan for the use of an sIRB in the applications/proposals they submit to the NIH. The NIH’s acceptance of the submitted plan will be incorporated as a term and condition in the Notice of Award or in the Contract Award. This policy also applies to the NIH Intramural Research Program.

Definitions
The **Authorization Agreement**, which is also called a reliance agreement, is the agreement that documents respective authorities, roles, responsibilities, and communication between an institution/organization providing the ethical review and a participating site relying on the sIRB.

A **multi-site study** uses the same protocol to conduct non-exempt human subjects research at more than one site.

**Participating site** in a multi-site study is a domestic entity that will rely on the sIRB to carry out the site’s IRB review of human subjects research for the multi-site study.

**sIRB** is the selected IRB of record that conducts the ethical review for participating sites of the multi-site study.

Roles and Responsibilities
**Applicant/Offeror.** In the application/proposal for research funding, the applicant/offeror is expected to submit a plan describing the use of an sIRB that will be selected to serve as the IRB of record for all study sites. The plan should include a statement confirming that participating sites will adhere to the sIRB Policy and describe how communications between sites and sIRB will be handled. If, in delayed-onset research, an sIRB has not yet been identified, applications/proposals should include a statement that awardees will follow this Policy and communicate plans to use a registered IRB of record to the funding NIH Institute/Center prior to initiat-
ing a multi-site study. The applicant/offeree may request direct cost funding for
the additional costs associated with the establishment and review of the multi-site
study by the sIRB, with appropriate justification; all such costs must be reasonable
and consistent with cost principles, as described in the NIH Grants Policy Statement
and the Federal Acquisition Regulation (FAR) 31.302 (Direct Costs) and FAR 31.203
(Indirect Costs).

Awardees. Awardees are responsible for ensuring that authorization agreements
are in place; copies of authorization agreements and other necessary documentation
should be maintained in order to document compliance with this policy, as needed.
As appropriate, awardees are responsible for ensuring that a mechanism for com-
munication between the sIRB and participating sites is established. Awardees may
delegate the tasks associated with these responsibilities.

Funding Institute or Center (IC). Funding ICs are responsible for management
and oversight of the award, including communicating with the awardee regard-
ing the implementation of its proposed plan to comply with the sIRB Policy. In the
event that questions arise about the awardee’s plan, including the IRB that has been
selected to serve as the sIRB, the funding IC will work with the awardee to resolve
them.

sIRB. The sIRB is responsible for conducting the ethical review of NIH-funded
multi-site studies for participating sites. The sIRB will be expected to carry out the
regulatory requirements as specified under the HHS regulations at 45 CFR Part 46.
In reviewing multi-site research protocols, the sIRB may serve as a Privacy Board, as
applicable, to fulfill the requirements of the HIPAA Privacy Rule for use or disclo-
sure of protected health information for research purposes. The sIRB will collabo-
rate with the awardee to establish a mechanism for communication between the
sIRB and the participating sites.

Participating Site. All sites participating in a multi-site study are expected to
rely on an sIRB to carry out the functions that are required for institutional compli-
ance with IRB review set forth in the HHS regulations at 45 CFR 46. Participating
sites are responsible for meeting other regulatory obligations, such as obtaining
informed consent, overseeing the implementation of the approved protocol, and
reporting unanticipated problems and study progress to the sIRB. Participating
sites must communicate relevant information necessary for the sIRB to consider lo-
cal context issues and state/local regulatory requirements during its deliberations.
Participating sites are expected to rely on the sIRB to satisfy the regulatory require-
ments relevant to the ethical review. Although IRB ethical review at a participat-
ing site would be counter to the intent and goal of this policy, the policy does not
prohibit any participating site from duplicating the sIRB. However, if this approach
is taken, NIH funds may not be used to pay for the cost of the duplicate review.

Exceptions

Exceptions to this policy will be made where review by the proposed sIRB would be
prohibited by a federal, tribal, or state law, regulation, or policy. Requests for excep-
tions that are not based on a legal, regulatory, or policy requirement will be consid-
ered if there is a compelling justification for the exception. The NIH will determine whether to grant an exception following an assessment of the need.

Effective Date
This policy applies to all competing grant applications (new, renewal, revision, or resubmission) with receipt dates on or after May 25, 2017. Ongoing, non-competing awards will not be expected to comply with this policy until the grantee submits a competing renewal application. For contracts, the policy applies to all solicitations issued on or after May 25, 2017. For the intramural program, the policy applies to intramural multi-site studies submitted for initial review after May 25, 2017.

Inquiries
Please direct all inquiries to:
NIH Office of Science Policy
Telephone: 301-496-9838
Email: SingleIRBPolicy@mail.nih.gov
\[152.11\] **FAQs on NIH Policy on the Use of a Single Institutional Review Board for Multi-Site Research**

National Institutes of Health

**What types of studies are expected to use a single IRB (sIRB) under the new NIH Policy?**

The sIRB policy applies to the domestic sites of NIH-funded multi-site studies where each site will conduct the same protocol involving non-exempt human subjects research, whether supported through grants, cooperative agreements, contracts, or the NIH Intramural Research Program. It does not apply to career development, research training or fellowship awards. Under the policy, “multi-site” is defined as two or more sites. Foreign sites participating in NIH-funded, multi-site studies will not be expected to follow this policy. The policy recognizes that it may not always be possible to use an sIRB, and it provides for exceptions.

**Are there any exceptions to the sIRB policy?**

Exceptions to the sIRB policy will be made when review by the proposed sIRB would be prohibited by federal, tribal, or state laws, regulations or policies. Requests for exceptions that are not based on a legal, regulatory, or policy requirement will be considered if there is a compelling justification for the exception. NIH will determine whether to grant an exception following an assessment of the need.

**Why is NIH promoting the use of a sIRB for multi-site research studies?**

The use of a single IRB of record for multi-site studies will help streamline the IRB review process and remove redundant hurdles to the initiation of such studies. The policy will allow research to proceed as effectively and expeditiously as possible. Eliminating duplicative IRB review is expected to reduce unnecessary administrative burdens and systemic inefficiencies while maintaining appropriate human subject protections. The shift in IRB workload away from redundant reviews is also expected to allow IRBs to concentrate more time and attention on the review of single site protocols, thereby enhancing research oversight.

**Who is responsible for selecting the sIRB and when must this be done?**

In the application/proposal for research funding, the applicant/offeror is expected to submit a plan describing the use of an sIRB that would be selected to serve as the IRB of record for all study sites. Where possible, the plan would include the registration number issued to the IRB by the HHS Office for Human Research Protections. For delayed-onset research, where the IRB cannot be identified, applications/proposals should include a statement that awardees will follow the sIRB policy and communicate plans to use a registered IRB of record to the funding NIH Institute/Center prior to initiating a multi-site protocol.

**What will happen if the applicant is not able to identify the sIRB, for example,
because the sites are in disagreement about the selection?
If the sIRB cannot be identified prior to award, terms and conditions restricting human subjects research will be placed on the award. If sites are unable to agree on the sIRB, the IC funding the research will assist in resolving the matter. The sIRB will need to be identified before the release of funds under the award.

How will the sIRB policy be enforced?
Compliance with the sIRB policy will be a term and condition of award. Failure to comply with the terms and conditions of an award may result in enforcement actions, including termination of funding.

What is the role of the human subjects protections programs at a site that is part of a multi-site trial but not the site of the sIRB?
Except for the IRB review described in HHS regulations (45 CFR 46) human subjects protections programs at participating sites will be responsible for meeting all of their current responsibilities. Participating sites are also responsible for meeting other regulatory obligations, such as obtaining informed consent, overseeing the implementation of the approved protocol, and reporting unanticipated problems and study progress to the sIRB. Participating sites must communicate relevant information necessary for the sIRB to consider local context issues and state/local regulatory requirements during its deliberations.

Where can I find more information on the sIRB policy?
More information about the sIRB policy may be found on the OSP Website. NIH will continue to provide additional resources and guidance to this page prior to the implementation date.

Additionally, questions about the sIRB policy may be sent to SingleIRBPolicy@mail.nih.gov

When does the sIRB policy take effect?
The sIRB policy applies to all competing grant applications (new, renewal, revision, or resubmission) with receipt dates on or after May 25, 2017, all contract solicitation issued on or after May 25, 2017, and all NIH Intramural studies submitted for initial IRB review after May 25, 2017.

What is the difference between a central IRB and a sIRB?
Both are designed to help streamline IRB review, and the terms are sometimes used interchangeably. However, the term central IRB is generally used to refer to an IRB that reviews many different research protocols. Central IRBs are also sometimes referred to as independent IRBs. As used in the policy, the term single IRB refers to the IRB (which may be a central IRB or an institution-based IRB) that is selected to serve as the one IRB of record for the review of one protocol that will be carried out at many sites.
NIH Policy on Dissemination of NIH-Funded Clinical Trial Information

National Institutes of Health

Notice Number: NOT-OD-16-149

Key Dates

Release Date: September 16, 2016

Effective Date: January 18, 2017

Related Announcements

NOT-OD-15-019

Issued by

National Institutes of Health (NIH)

Purpose

Summary

The National Institutes of Health (NIH) is issuing this policy to promote broad and responsible dissemination of information from NIH-funded clinical trials through ClinicalTrials.gov. The policy establishes the expectation that all investigators conducting clinical trials funded in whole or in part by the NIH will ensure that these trials are registered at ClinicalTrials.gov, and that results information of these trials is submitted to ClinicalTrials.gov. The policy is complementary to the statutory and regulatory reporting requirements. These are section 402(j) of the Public Health Service Act, as amended by Title VIII of the Food and Drug Administration (FDA) Amendments Act of 2007 (FDAAA), and the regulation Clinical Trial Registration and Results Information Submission, at 42 CFR Part 11. Hereafter, we refer to section 402(j) as the statute and 42 CFR Part 11 as the rule or regulation. This policy as well as the rule were posted in the Federal Register.

Supplemental Information

On November 19, 2014, and in tandem with the publication of the Notice of Proposed Rulemaking (NPRM) on Clinical Trial Registration and Results Submission, the NIH issued a complementary draft policy for public comment on the Dissemination of NIH-funded Clinical Trial Information\textsuperscript{1,2}. The draft policy proposed that all NIH-funded awardees and investigators conducting clinical trials, funded in whole or in part by the NIH, regardless of study phase, type of intervention, or whether they are subject to the statutory registration and results information submission requirements, would be expected to ensure that those clinical trials are registered and results information is submitted to ClinicalTrials.gov. It further stated that submission of the same type of registration and results information would be expected and in the same timeframes as the trials subject to the statute, and that this information would be made publicly available through the ClinicalTrials.gov website.

The NIH received approximately 240 public comments on its proposed policy. The comments came from a range of stakeholders including researchers, academic/
research institutions, medical practitioners, patients, patient/disease advocacy groups, scientific/professional societies and associations, device manufacturers, trade associations, not-for-profit non-governmental organizations, and the general public. The NIH appreciated the public interest in the proposed policy and the time made and effort taken by stakeholders to provide comments. The NIH carefully considered those comments in the development of the final policy. In the next section, we provide an overview of the comments on the proposed policy. Because those in compliance with the policy would be expected to follow specific provisions of the rule, a number of commenters on the policy reiterated comments that they submitted to the docket in response to the NPRM. Since these comments are discussed at length in the preamble of the rule, we are limiting the discussion of comments here primarily to those that identified issues specific to the policy, such as its scope, applicability, and impact on NIH-funded awardees and investigators.

Overview of the Public Comments
A significant majority of the public comments were supportive of the proposed NIH policy and of its application to the full range of NIH-funded clinical trials. Most commenters appreciated the impetus behind the policy and agreed that it was important to provide ways other than journal publication for clinical trial results to be disseminated and made publicly available to researchers, health care providers, and patient communities. They recognized that increased availability of information from NIH-funded clinical trials would help researchers by informing the design and development of their future studies, address the needs of patients and health care providers seeking information about NIH-funded trials, and serve the public’s interest by preventing duplication of unsafe and unsuccessful trials and mitigating publication bias. They also agreed that improving the availability of clinical trial information will strengthen the public’s trust in biomedical research as well as assure volunteers that their participation in clinical trials has advanced knowledge on human health and disease. A number of commenters also suggested that the policy is particularly appropriate because NIH-funded clinical trials are supported by public funding, and recipients of those funds have a special obligation to ensure that the nation’s investment is maximized.

A number of comments from academic investigators and stakeholder organizations were supportive of the policy and its goals. Others, however, disagreed with the policy, suggesting that it was ill-advised and/or unnecessary. These commenters suggested that the benefit of greater transparency was outweighed by the burden and cost of the policy to those who conduct clinical trials and that the NIH had not made a sufficient case for the policy or that it was not evidence-based. Some commenters suggested that the NIH should simply encourage investigators to be more transparent or that the NIH’s public access policy made the policy unnecessary since it requires NIH-funded investigators to make their published articles publicly available through PubMed Central.

Scope and Applicability of the Policy
Although the majority of commenters fully supported the scope of the policy, i.e.,
that it should apply to NIH-funded clinical trials of FDA-regulated drugs regardless of phase, small feasibility studies of devices, and trials of interventions not regulated by FDA, including surgical and behavioral interventions, there were comments suggesting that the scope was too narrow, or conversely, too broad.

One commenter suggested that the policy ought to encompass more detailed summary results, such as Clinical Study Reports, as well as de-identified individual patient-level data. One commenter suggested that the NIH should consider extending the policy to preclinical in vivo (laboratory) animal studies because the arguments for the registration and required reporting of preclinical in vivo (laboratory) animal studies are similar to those of human clinical trials. Some commenters suggested that the policy should be retroactive and apply to clinical trials that are underway as of the policy’s effective date as well as those that have already been completed as of the effective date.

On the other hand, there were other comments suggesting that the policy should not apply to phase 1 or so called phase 0 trials, pilot trials designed to examine the feasibility of an approach, trials mounted by an investigator at a small organization, or trials that are unable to enroll a statistically significant number of participants. One suggested that even pilot trials that reach their enrollment target should not be expected to submit results information because the results might be more misleading than helpful. Another proposed that reporting on phase 1 clinical trials should be limited to adverse events information because these trials are designed to assess safety rather than efficacy, and reporting non-safety outcomes could be misleading. Another suggested that clinical trials not covered under the statute should not submit adverse event information unless a regulatory authority or equivalent body has first performed an analysis of the event in order to prevent public misunderstanding. Another commenter suggested that submission of data from early phase research could divert limited research resources and time from phase 3 studies. Another suggested that only information about phase 3 clinical trials should be included in ClinicalTrials.gov because information about early stage trials could confound, rather than enhance, public understanding of human health and could, thereby, inadvertently adversely affect patient safety.

One commenter suggested that the policy should apply only to the registration of clinical trials, not the submission of results information. This commenter asserted that registration information was sufficient because any interested party could follow up with an investigator to learn more about the trial and because submission of registration information takes a fraction of the time needed to submit results information.

There were a few commenters who took issue with the application of the policy to trials that are only partially funded by the NIH. They asserted that the policy would entail the disclosure of confidential commercial information and that the NIH’s authority to do so is limited to a trial that is wholly NIH-funded and involves a product with research and development costs wholly government-funded. A few other commenters suggested that the policy should exclude clinical trials that use NIH-supported infrastructure, but involve no NIH funds.
**NIH Definition of Clinical Trial**

Some commenters addressed the NIH definition of clinical trial, which is key to determining the policy’s applicability. There was support for the breadth of the definition, i.e., encompassing all interventional studies with biomedical outcomes (e.g., pharmacokinetic and behavioral outcomes, as well as health-related outcomes). One commenter, however, thought more elaboration on the definition was needed to clarify the meaning of “health-related biomedical or behavioral outcomes.” They thought that without such specificity, the definition might be interpreted to exclude studies that contain valuable information for public health research, science, and clinical medicine. Commenters believed that addressing this issue would be vital to ensure a common understanding that the NIH policy applies to all clinical trials involving a biomedical or behavioral intervention. Another suggested that a study involving only one participant should not be considered a clinical trial since a trial with a sample size of one would not provide any valid data to share with the public.

Some commenters noted that the wording of the NIH definition was not identical to the wording of the definition of clinical trial in the proposed rule or to how other organizations, e.g., the World Health Organization (WHO), International Committee of Medical Journal Editors (ICMJE), and Centers for Medicare & Medicaid Services (CMS), use the term. They were concerned that investigators would have difficulty understanding their obligations under the policy and under the rule and in meeting requirements of others. They called for reconciliation of any actual or apparent differences in the definitions.

A commenter urged the NIH to issue guidance to help determine whether a study is a clinical trial under the definition and to clarify how disagreements in the matter would be resolved and communicated.

**Results Information Submission Timeline**

A few commenters raised concerns about the proposed rule’s timeline for reporting results information, asserting that 12 months after the primary completion date of the clinical trial (i.e., the date of final data collection for the primary outcome measure) is too soon, particularly for NIH-funded academic investigators. These commenters suggested that academic investigators will have more difficulty meeting the timeframe because they must also spend time teaching, fulfilling clinical care responsibilities, and writing grant applications. Another commenter suggested that a 12-month timeframe would also be more challenging for academic investigators because, unlike industry investigators, they generally cannot count on support from a central administrative service to help them carry out their reporting responsibilities. Decentralization of information in academic centers would also present a particular challenge to those covered by the NIH policy, according to another commenter, who also suggested that the mobility of new investigators may make it difficult to meet timelines. These commenters urged the NIH to allow a longer submission timeframe, e.g., 18 or 24 months. A few noted that providing more time would also give investigators time to prepare journal publications, and one also expressed concern about the possibility that journal editors will begin to consider submission
of results information to ClinicalTrials.gov as prior publication, which could thwart journal publication altogether.

**Structured Results Data Elements**

A few commenters suggested that the data submission structure, which is determined by the provisions of the statute, does not work well for clinical trial types that will be covered only the policy, e.g., phase 1 trials of drugs/biologics, small feasibility device studies, trials of social and behavioral interventions, or those with non-standard designs. These commenters thought that other fields would need to be added to the ClinicalTrials.gov to enable investigators to report data elements for those trials appropriately and accurately. They also suggested increasing the character limit on data fields to allow for more careful and nuanced explanations. Commenters also suggested that if the ClinicalTrials.gov cannot accommodate these types of trials, investigators should be exempted from the policy. One commenter requested that an additional data element should be included to allow an investigator to indicate that the trial’s hypothesis had been confirmed.

**Protecting Privacy**

One commenter raised a concern about the policy’s impact on the privacy of clinical trial participants suggesting that it might be easy to re-identify participants in many NIH-funded pilot studies with small sample sizes. The commenter pointed to the five percent threshold for non-serious adverse events and site location information as the data elements creating the vulnerability. The commenter urged the NIH to allow an investigator to obtain a waiver from results information submission where participant privacy was at risk.

**Compliance Issues**

The proposed policy noted that compliance with the policy would be a term and condition of award and that non-compliance may provide a basis for enforcement actions, including termination. A few commenters discussed the importance of compliance. One suggested that the NIH should take compliance records into account when considering future applications for funding. They suggested that such an approach could be more effective than terminating funding of a current grant since most of the research may already be completed. Another thought that making compliance a term and condition of award was important and that it would incentivize good behavior and help change attitudes about the value of enhancing availability of clinical trial information.

Other commenters raised concerns about the costs that will be incurred by NIH-funded academic institutions to ensure that clinical investigators are following the policy. They suggested institutions will need to provide more administrative support and other resources to help investigators comply and that this would be difficult given the indirect cost cap of 26 percent. Commenters urged the NIH to allow the time and effort required for ClinicalTrials.gov compliance to be included as a direct cost on NIH grants. Another commenter suggested that the increased results
information submissions brought on by the NIH policy will stretch the NIH’s capabilities and that it will be important for the NIH to ensure that sufficient resources are available to manage high volume data uploads and customer service requests.

**Overview of Final NIH Policy**

The NIH considered all the comments received on the proposed policy as well as those that were submitted in response to the NPRM. There was overwhelming support for both the proposed policy and the NPRM, particularly among concerned citizens, scientific societies, medical practitioners, and individual scientists. There were also concerns expressed, particularly in the comments from academic commenters. We appreciate those concerns and understand that the policy will create additional work for many investigators. However, we believe that the work should not be seen as a burden, but, rather, an inherent part of an investigator’s commitment to the advancement of science. The benefits will, in the long run, accrue to the investigators as well as to the public, patients, and the enterprise as a whole because transparency will improve future research designs and maximize the public’s investment – and their trust – in research. Equally important, it will help investigators fulfill the ethical obligation they have to clinical trial participants, namely to ensure that the findings from their participation contribute to generalizable knowledge and the advancement of public health.

As we noted in the preamble to the proposed policy, a fundamental premise of all NIH-funded research is that the results of such work must be disseminated in order to contribute to the general body of scientific knowledge and, ultimately, to the public health. The NIH awardees have always been expected to make the results of their activities available to the research community and to the public at large because it is intrinsic to the scientific process. In research involving human beings, moreover, scientists also have an ethical obligation to ensure that the burden and risk that volunteers assume by participating in research comes to something, at the very least by ensuring that others are aware of the study and that its findings contribute to the advancement of human health.

We disagree with commenters who suggested that there is no need for coverage of certain types of trials, such as early exploratory trials, small trials, trials assessing only safety, or trials that terminate before reaching enrollment targets. The benefits of transparency and the need to fulfill the ethical obligation to participants is as relevant to these types of trials as to any other type. We were also not persuaded that the timeframe for results information submission should be longer for academic investigators because of their competing responsibilities or that they should be allowed more time to publish their results in a journal. The timeframe of 12 months from the primary completion date should provide enough time for investigators to organize their data and submit results information. We are also confident that academic institutions can develop central support services as necessary to assist investigators should they need it. We also believe that 12 months represents an appropriate balance between investigators’ interests and the interests of the public in having access to the results of a publicly funded trial. In addition, it will be possible to
delay results information submission for up to two years beyond the initial deadline with a certification that regulatory approval of the trial product is being sought.

Some commenters suggested that a policy on clinical trial information dissemination is not needed because it duplicates other NIH policies. This policy is certainly in keeping with our principles, longstanding expectations, and other policies as well as the more recent broad policy call for scientific agencies to increase public access to scientific data. However, it does not duplicate any other NIH policy, nor does any other NIH policy accomplish what this one will.

Some commenters also contended that this policy is not necessary because the results of clinical trials will be published or because they can be obtained via direct requests to the trial’s principal investigator. In fact, research has shown that the results of a significant portion of clinical trials are not published or published in a timely manner. For example, a 2012 study of NIH-funded clinical trials found that after a median of 51 months following trial completion, 32 percent were unpublished. A more recent study of the trial publication rate among 51 U.S. academic medical centers found that 43 percent of their clinical trials were unpublished two years after the trial was completed. While the ability to seek results information from the original investigator is useful to facilitate collaborations, to access individual-level data, and to gain insights from those who conducted the trial, it is not a surefire way to increase access to trial results nor is it efficient or transparent, particularly for the public.

We believe that the public availability of clinical trial results information will be beneficial to all parties in the long run, including those who are covered by this policy. All investigators stand to benefit from this policy. For example, science may progress more quickly because investigators will be able to learn from trials to which they otherwise would not have had access because they were unpublished. In addition, the public availability of results information helps investigators design trials and Institutional Review Boards (IRBs) review proposed trials, by allowing them to weigh the proposed study’s risks and benefits against a more complete evidence base than is currently available through the scientific literature. Submission and posting of results information will also help investigators avoid repeating trials on interventions that have been found to be unsafe or unsuccessful while also providing access to information that may help verify findings.

For all of these reasons, we have not changed the essential contours of the policy. In terms of scope, the policy still applies to all NIH-funded awardees and investigators conducting clinical trials funded in whole or in part by the NIH regardless of study phase, type of intervention, or whether they are subject to the statute and to the rule. It clarifies that the policy is an expectation, that applicants and offerors are required to submit a plan outlining how they will meet the policy’s expectations, and, that upon receipt of an award, an awardee will be obligated to adhere to their plan through the terms and conditions of the award. The required plan can be a brief statement explaining whether the applicant/offeror intends to register and submit results information to ClinicalTrials.gov as outlined in the policy or to meet the expectations in another manner. It is important to remember that an NIH-
funded clinical trial that meets the definition of an applicable clinical trial is subject to the regulation and, therefore, register and submission of results information to ClinicalTrials.gov is a requirement.

The policy applies to both the extramural and intramural programs. For the NIH extramural program, the policy applies to applications for funding including for grants, other transactions, and contracts submitted on or after the policy’s effective date that request support for the conduct of a clinical trial that is initiated on or after the policy’s effective date. This means that the policy does not apply to clinical trials in ongoing, non-competing awards, but that it will apply if the grantee submits a competing renewal application that includes a new clinical trial, i.e., a clinical trial initiated on or after the effective date of the policy. For the intramural program, the policy applies to clinical trials initiated on or after the policy’s effective date. The policy’s effective date is January 18, 2017. The policy clarifies that a clinical trial that uses NIH-supported infrastructure, but does not receive NIH funds to support its conduct, is not subject to the policy.

The policy outlines the responsibilities for NIH-funded investigators according to whether the trial is covered by the policy only or also the rule. For those covered by the policy only, NIH-funded awardees and investigators will be expected to submit the same registration and results information in the same timeframes as those subject to the statute and rule. The timeline for registration is not later than 21 calendar days after the enrollment of the first participant. The standard timeline for results information is not later than one year after the trial’s primary completion date, but the policy also allows for delayed submission of results information in certain circumstances for up to two additional years for trials of products regulated by the FDA that are unapproved, unlicensed, or uncleared or for trials of products for which approval of a new use is being sought.

Although the policy does not apply to NIH-funded clinical trials initiated before the effective date, we encourage all ongoing NIH-funded clinical trials to follow it. It is also critical for investigators conducting NIH-funded applicable clinical trials that are subject to the statute and rule to be sure they are in compliance with those requirements.

The policy continues to use the NIH definition of “clinical trial” as proposed in the draft policy to determine which research studies are covered by the policy. This definition was developed in 2014 to reflect the NIH research mission and the scope of clinical trials within the NIH portfolio. With regard to the concern expressed by a public commenter that the phrase “health-related biomedical or behavioral outcomes” might be too narrow, we note that the definition considers biomedical and behavioral outcomes to be health-related outcomes in interventional studies that meet the other components of the definition. Also, regarding the concern that the wording of the definitions of clinical trial in this policy and the rule differ, this is so mainly in reference to outcomes, i.e., the NIH definition explicitly references behavioral outcomes whereas the definition in the rule encompasses them within the term “health related.” These distinctions are not significant in terms of defining what is covered by the NIH policy. All NIH-funded clinical trials, whether they
are assessing biomedical or behavioral outcomes or whether they are employing an FDA regulated product, are covered by the policy. An NIH-funded clinical trial assessing a behavioral intervention that is not regulated by the FDA would meet both definitions of clinical trial, and, thereby, be covered by the policy. However, such a trial would not be subject to the rule because it does not meet the rule’s definition of “applicable clinical trial.” Guidance available on the NIH’s website can help awardees and investigators understand whether a research study is a clinical trial for purposes of the NIH policy (see first website listed below). Questions should be directed to the NIH program staff. To understand whether an NIH-funded clinical trial is also subject to the statute and the rule, awardees and investigators should look to the rule’s definition of “applicable clinical trial.”

NIH-funded awardees and investigators will be expected to follow the provisions of the rule in terms of when they register their trials, what information they provide as part of the registration process, when they submit their results information, and what results information is submitted. All of the alternate approaches in the rule will also be available to those covered by the policy, e.g., for delayed posting of device registration information, delayed submission of results information for trials involving unapproved products or products for which a new use is sought, extensions for good cause, and waivers that might be needed for privacy or national security reasons.

With regard to the concern that ClinicalTrials.gov is not set up to accept NIH-funded trials that are small or exploratory in nature or involve behavioral interventions, it is important to note that the ClinicalTrials.gov does accommodate the submission of all trial types and that a variety of study and trial types have been entered into ClinicalTrials.gov since its inception. In addition, ClinicalTrials.gov has resources available to assist investigators in navigating the registration and results information submission processes. These resources will continue to be updated over time to be responsive to investigators’ needs and the evolving clinical research enterprise. Therefore, it should not be necessary for a clinical investigator of an NIH-funded clinical trial to seek an exemption from the policy for reasons related to the capacity of ClinicalTrials.gov to accommodate all types of clinical trials.

Registration and results information submission to ClinicalTrials.gov complements publication of trial results in peer-reviewed scientific journals. Information submitted to ClinicalTrials.gov is displayed in a structured way and includes a complete list of all pre-specified outcome measures and all adverse events. Journal articles, on the other hand, typically focus on a select set of outcome measures and adverse events and include background and discussion of the implications of the results. Information submitted to ClinicalTrials.gov undergoes a quality control review whereas journal articles will be peer reviewed. With regard to the concern that submission of results could make journal publication more difficult or impossible, the ICMJE has stated that submission of summary results to ClinicalTrials.gov will not be considered prior publication and will, thus, not interfere with journal publication. We encourage all NIH-funded investigators to publish the results of their studies in peer-reviewed journals.
We have no doubt that this policy will be beneficial for the research community as well as the public generally, but we recognize that adhering to it will be a new obligation. We will provide additional guidance to facilitate implementation and help awardees and investigators understand the policy as well as the tasks described in the rule that they will be expected to undertake. In terms of the costs of complying with the policy, grantees are permitted to charge the salaries of administrative and clerical staff as a direct cost. Such staff could assist investigators in meeting their responsibilities under the policy. In addition, administrative costs can be covered through indirect cost recovery.

We intend for this policy to benefit all communities who seek information about NIH-funded clinical trials, and we are confident that the benefits of transparency will become evident soon after the policy is implemented. We plan to evaluate the implementation and impact of the policy from the perspective of those who comply with it as well as from the perspective of ClinicalTrials.gov users, including patients, providers, and investigators.

We look forward to engaging with NIH-funded investigators and awardees as they work to meet the expectations of this important public policy. Information to assist applicants, offerors, and investigators is available at the following websites. The NIH will continue to add guidance materials to these sites as the policy’s implementation continues.

https://clinicaltrials.gov/ct2/manage-recs
https://grants.nih.gov/clinicaltrials_fdaaa/faq.htm

The NIH policy is set forth below.

References
3. A compilation of public comments on the draft NIH Policy on Dissemination of NIH-Funded Clinical Trial Information is available at: http://osp.od.nih.gov/sites/default/files/resources/Clinical%20Trials%20Dissemination%20Policy%20Com


7. Chen et al., BMJ. 2016 Feb 17;352:i637 http://www.bmj.com/content/bmj/352/bmj.i637.full.pdf


10. 45 CFR 75.413(c) and Chapter 8.1.1.6, Direct Charging Salaries of Administrative and Clerical Staff. NIH Grants Policy Statement. https://grants.nih.gov/grants/policy/nihgps/HTML5/section_8/8.1_changes_in_project_and_budget.htm

**NIH Policy on Dissemination of NIH-Funded Clinical Trial Information**

**Purpose**

The National Institutes of Health (NIH) Policy on Dissemination of NIH-funded Clinical Trial Information establishes the expectation that all NIH-funded awardees and investigators conducting clinical trials, funded in whole or in part by the NIH, will ensure that their NIH-funded clinical trials are registered at, and that summary results information is submitted to, ClinicalTrials.gov for public posting. The purpose of the policy is to promote broad and responsible dissemination of information from NIH-funded clinical trials through ClinicalTrials.gov. Disseminating this information supports the NIH mission to advance the translation of research results into knowledge, products, and procedures that improve human health.

This policy is complementary to requirements in the Clinical Trial Registration and Results Information Submission regulation at 42 CFR Part 11, hereinafter referred to as the regulation. Clinical trials that are subject to the regulation are, in general, clinical trials of drug, biological, and device products regulated by the Food and Drug Administration (FDA), except phase 1 trials of drug and biological prod-
ucts and small feasibility studies of device products. A pediatric post-market surveillance study of a device product required by the FDA is also subject to the regulation. Clinical trials subject to the regulation are generally called “applicable clinical trials.” Applicable clinical trials are required to be registered in ClinicalTrials.gov not later than 21 calendar days after the enrollment of the first participant. Results information from those trials generally must be submitted not later than one year after the trial’s primary completion date. Submission of results information can be delayed in certain circumstances for up to two additional years for trials of products regulated by the FDA that are unapproved, unlicensed, or uncleared or for trials of products for which approval, licensure, or clearance of a new use is being sought.

**Scope and Applicability**

This policy applies to all NIH-funded clinical trials regardless of study phase, type of intervention, or whether they are subject to the regulation. For example, NIH-funded phase 1 clinical trials of an FDA-regulated product are covered by this policy as are clinical trials studying interventions not regulated by the FDA, such as behavioral interventions. As such, the policy encompasses all NIH-funded clinical trials, including applicable clinical trials subject to the regulation. All NIH-funded clinical trials will be expected to register and submit results information to ClinicalTrials.gov.

This policy applies to clinical trials funded in whole or in part through the NIH extramural and intramural programs. For the NIH extramural program, the policy applies to applications for funding including for grants, other transactions, and contracts submitted on or after the policy’s effective date that request support for the conduct of a clinical trial that is initiated on or after the policy’s effective date. For the NIH intramural program, the policy applies to clinical trials initiated on or after the policy’s effective date.

This policy does not apply to a clinical trial that uses NIH-supported infrastructure but does not receive NIH funds to support its conduct.

**Responsibilities**

As part of their applications or proposals, applicants and offerors seeking NIH funding will be required to submit a plan for the dissemination of NIH-funded clinical trial information that will address how the expectations of this policy will be met. NIH-funded awardees and investigators conducting clinical trials funded in whole or in part by the NIH will be required to comply with all terms and conditions of award, including following their plan for the dissemination of NIH-funded clinical trial information.

Consistent with those terms and conditions, the responsibilities of such awardees and investigators will fall within one of the three categories. The category depends on whether, under the regulation, the clinical trial is also an “applicable clinical trial” and the awardee or investigator is the “responsible party.”

1. If the NIH-funded clinical trial is an applicable clinical trial under the regulation and the awardee or investigator is the responsible party, the awardee or investigator will ensure that all regulatory requirements are met.
2. If the NIH-funded clinical trial is an applicable clinical trial under the regulation but the awardee or investigator is not the responsible party, the awardee or investigator will coordinate with the responsible party to ensure that all regulatory requirements are met.

3. If the NIH-funded clinical trial is not an applicable clinical trial under the regulation, the awardee or investigator will be responsible for carrying out the tasks and meeting the timelines described in regulation. Such tasks include registering the clinical trial in ClinicalTrials.gov and submitting results information to ClinicalTrials.gov.

In addition, informed consent documents for clinical trials within all three categories are to include a specific statement relating to posting of clinical trial information at ClinicalTrials.gov.

Each NIH-funded clinical trial should have only one entry in ClinicalTrials.gov that contains its registration and results information. Awardees and investigators need not and should not create a separate record of the applicable clinical trial to comply with this policy.

The NIH will publicly post registration information and results information in ClinicalTrials.gov.

Definitions

Clinical Trial. For purposes of this policy, a “clinical trial” means “a research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include placebo or other control) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes.”

This definition encompasses phase 1 trials of FDA-regulated drug and biological products, small feasibility studies of FDA-regulated device products, and studies of any intervention not regulated by the FDA, e.g., behavioral interventions. This definition of “clinical trial” is broader than the term “applicable clinical trial” as defined in the regulation.

Responsible Party. In the policy, the awardee or the investigator is responsible for meeting the expectations of this policy. In the regulation, a “responsible party” means, in part, “with respect to a clinical trial, the sponsor of the clinical trial, as defined in 21 CFR 50.3 (or any successor regulation); or the principal investigator of such clinical trial if so designated by a sponsor, grantee, contractor, or awardee, so long as the principal investigator is responsible for conducting the trial, has access to and control over the data from the clinical trial, has the right to publish the results of the trial, and has the ability to meet all of the requirements under [42 CFR Part 11] for the submission of clinical trial information.”

Primary Completion Date. In the policy, this term has the same meaning as the term “primary completion date” in the regulation, which is “the date that the final subject was examined or received an intervention for the purposes of final collection of data for the primary outcome, whether the clinical trial concluded according to the pre-specified protocol or was terminated.”
Registration Information. In the policy, this term has the same meaning as the term “registration information” in the regulation. In the regulation, registration information consists of descriptive information, recruitment information, location and contact information, and administrative data.8

Results Information. In the policy, this term has the same meaning as the term “results information” in the regulation. In the regulation, results information includes participant flow, demographic and baseline characteristics, outcomes and statistical analyses, adverse events, the protocol and statistical analysis plan, and administrative information.9

Compliance
If the clinical trial is NIH-funded in whole or in part, expectations for clinical trial registration and summary results submission will be included in the terms and conditions of the award. Failure to comply with the terms and conditions of the NIH award may provide a basis for enforcement actions, including termination, consistent with 45 CFR 75.371 and/or other authorities, as appropriate. If the NIH-funded clinical trial is also an applicable clinical trial, non-compliance with the requirements specified in 42 USC 282(j) and 42 CFR Part 11 may also lead to the actions described in 42 CFR 11.66.

Effective Date
This policy is effective January 18, 2017.

Footnotes
1. ClinicalTrials.gov is operated by the National Library of Medicine within the NIH.
2. The Clinical Trial Registration and Results Information Submission regulation at 42 CFR Part 11 was issued in the Federal Register in September 2016. The regulation implements section 402(j) of the Public Health Service Act.
4. Note that the regulation also includes a definition of “clinical trial.” That definition is “a clinical investigation or a clinical study in which human subject(s) are prospectively assigned, according to a protocol, to one or more interventions (or no intervention) to evaluate the effect(s) of the intervention(s) on biomedical or health related outcomes” (see 42 CFR 11.10 (a)). For the purposes of this policy, the regulatory definition and the definition in this policy are treated as synonymous.
5. In the regulation, applicable clinical trial is defined as an applicable device clinical trial or an applicable drug clinical trial. The regulation defines an applicable device clinical trial to mean, in part, “a prospective clinical study of health outcomes comparing an intervention with a device product subject to section 510(k), 515, or 520(m) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 360(k), 21 U.S.C. 360e, 21 U.S.C. 360j(m)) against a control in human subjects (other than a small clinical trial to determine the feasibility of a device product, or a clinical trial to test
prototype device products where the primary outcome measure relates to feasibil-
ity and not to health outcomes).” The regulation defines an applicable drug clinical
trial to mean, in part, “a controlled clinical investigation, other than a phase 1 clini-
cal investigation, of a drug product subject to section 505 of the Federal Food, Drug,
and Cosmetic Act (21 U.S.C. 355) or a biological product subject to section 351 of
the Public Health Service Act (42 U.S.C. 262), where “clinical investigation” has the
meaning given in 21 CFR 312.3 (or any successor regulation) and “phase 1” has the
meaning given in 21 CFR 312.21 (or any successor regulation).

6. See 42 CFR 11.10 (a) and 42 CFR 11.4.
7. See the complete definition at 42 CFR 11.10 (a).
8. See 42 CFR 11.10 (b) and 42 CFR 11.28 for the specific data elements.
9. See 42 CFR 11.28 for complete results information and specific data elements.

Inquiries
Please direct all inquiries to:

    NIH Office of Science Policy
    Telephone: 301-496-9838
    Email: clinicaltrials.disseminationpolicy@mail.nih.gov
Final Revisions to the “Common Rule”
Department of Health and Human Services

The U.S. Department of Health and Human Services and 15 other federal agencies today issued a final rule to update regulations that safeguard individuals who participate in research. Most provisions in the new rule will go into effect in 2018.

The new rule strengthens protections for people who volunteer to participate in research, while ensuring that the oversight system does not add inappropriate administrative burdens, particularly to low-risk research. It also allows more flexibility in keeping with today’s dynamic research environment.

The current regulations, which have been in place since 1991, are often referred to as the “Common Rule.” They were developed at a time when research was conducted predominantly at universities and medical institutions, and each study generally took place at a single site. Since then, research with human participants has grown in scale and become more diverse and data has become digital.

In September 2015, HHS and the other Common Rule agencies published a Notice of Proposed Rulemaking (NPRM), which drew more than 2,100 comments. In response to concerns raised during the extensive review process, the final rule contains a number of significant changes from the proposed rule, including the removal of a provision that would have required researchers to obtain consent before using a study participant’s non-identified biospecimens. The final rule maintains the current practice with respect to oversight of these specimens.

The final rule will now generally expect consent forms to include a concise explanation – at the beginning of the document – of the key information that would be most important to individuals contemplating participation in a particular study, including the purpose of the research, the risks and benefits, and appropriate alternative treatments that might be beneficial to the prospective subject.

“Over the years, many have argued that consent forms have become these incredibly lengthy and complex documents that are designed to protect institutions from lawsuits, rather than providing potential research subjects with the information they need in order to make an informed choice about whether to participate in a research study,” said Jerry Menikoff, MD, who directs the HHS Office for Human Research Protections, which led the government’s efforts to overhaul the regulations. “We are very hopeful that these changes and all the others that reduce unnecessary administrative burdens will be beneficial to both researchers and research participants.”

Important elements in the final rule issued today include:

◆ The requirement for consent forms to provide potential research subjects with a better understanding of a project’s scope, including its risks and benefits, so they can make a more fully informed decision about whether to participate.

◆ Requirements, in many cases, to use a single institutional review board (IRB) for multi-institutional research studies. The proposal from the NPRM has been modified, however, to add substantial increased flexibility in now allowing
broad groups of studies (instead of just specific studies) to be removed from this requirement.

- For studies on stored identifiable data or identifiable biospecimens, researchers will have the option of relying on broad consent obtained for future research as an alternative to seeking IRB approval to waive the consent requirement. As under the current rule, researchers will still not have to obtain consent for studies on non-identified stored data or biospecimens.

- The establishment of new exempt categories of research based on the level of risk they pose to participants. For example, to reduce unnecessary regulatory burden and allow IRBs to focus their attention on higher risk studies, there is a new exemption for secondary research involving identifiable private information if the research is regulated by and participants protected under the HIPAA rules.

- Removal of the requirement to conduct continuing review of ongoing research studies in certain instances where such review does little to protect subjects.

- Requirement that consent forms for certain federally funded clinical trials be posted on a public website.

The final rule differs in important ways from the proposed rule. Some examples of proposals that, based on feedback from the public, are not being adopted, include:

- The final rule does not adopt the proposal to require that research involving non-identified biospecimens be subject to the Common Rule, and it does not require that consent be obtained in order to conduct such research. In general, researchers can continue to use such biospecimens in the way they are currently using them.

- To the extent that some of the NPRM proposals relied on tools or standards that had not yet been proposed, the final rule either does not adopt those proposals or includes revisions to eliminate such reliance. Examples of items that were not included in the final rule include a template to be used for broad consent forms, and a decision tool to be used for making exemption determinations.

- The final rule does not expand the policy to cover clinical trials that are not federally funded.

- The final rule does not adopt the NPRM’s proposed concept of “excluded” activities. Generally, activities proposed to be excluded are now described as not satisfying the definition of what constitutes research under the regulations or are classified as exempt.

- The final rule does not include the proposed standardized privacy safeguards for identifiable private information and identifiable biospecimens. Instead, in most respects, it retains the current approach to privacy standards.

- The final rule does not adopt the proposal for more stringent criteria for obtaining a waiver of the consent requirements for identifiable biospecimens.

Medical advances would not be possible without individuals who volunteer to participate in research. Oversight and protection of research participants is an important safeguard and essential to advancing the research enterprise. Today’s ac-
tion reaffirms the federal government’s commitment to all those who participate in research studies.

To view the final rule, click here.
§1520.14 **Summary of Changes to the Common Rule**

Council on Governmental Relations

**Effective Dates**

The final rule is effective January 19, 2018 with the exception of cooperative research (mandated single IRB review) for which the compliance date is January 20, 2020. Research approved, waived or determined to be exempt prior to January 19, 2018 will continue to be subject to the pre-2018 rule. Institutions can choose, on a study-by-study basis, whether to subject research to the new or pre-2018 regulations.

**Biospecimens and Private Information**

The final rule does not expand the definition of “human subject” to include non-identified biospecimens. The preamble to the final rule questions the premise that the majority of the public wishes to be consented for secondary research use of biospecimens based on public comments submitted in response to the NPRM, but notes that Federal departments and agencies have the authority to establish policies with additional requirements related to consent for research with nonidentifiable biospecimens. The definition of “human subject” has been changed, however, (per the preamble, for clarification) to explicitly include identifiable biospecimens. Per the rule:

> Human subject means a living individual about whom an investigator (whether professional or student) conducting research:

   (i) Obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or
   
   (ii) Obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens.”

   The final rule provides a definition of “identifiable biospecimens.” The definition of “identifiable biospecimen” and “identifiable private information” will be re-examined within one year of publication of the rule and every four years thereafter. See section 46.103 below for additional information.

   The final rule does not adopt the proposal for more stringent waiver criteria that would have made waiver for secondary research use of biospecimens “very rare.” Per the preamble to the rule, the Newborn Screening Saves Lives Reauthorization Act, which does not allow for waiver of consent for federally funded research with newborn dried blood spots will not be effective as of January 19, 2018, the effective date of the final Common Rule.

   The final rule allows for the optional use of broad consent for storage and secondary research use of identifiable private information or identifiable biospecimens in lieu of obtaining study-specific informed consent. Investigators can continue to use biospecimens that are coded or to seek waiver of consent for use of biospecimens with identifiers retained consistent with current practices. Where broad con-
sent is obtained, storage and secondary research use is exempt with a requirement for limited IRB review. This exemption does not apply if the investigator includes returning individual research results in the study plan. The preamble indicates that HHS expects to develop guidance on broad consent at a later date which could include a template.

Six additional elements of consent are required for broad consent none of which can be omitted or altered where broad consent is solicited. These include a “general description of the types of research that may be conducted”; a description of the identifiable information or biospecimens that might be used in research, whether sharing might occur, and the types of institutions or researchers that might conduct the research; a description of the period of time identifiable information and biospecimens might be stored and used for research; “a statement that the subject will not be informed of the details of any specific research studies that might be conducted...and that subjects might have chosen not to consent to some of those specific research studies”; unless determined otherwise a statement that research results may not be disclosed to the subject; and contact information for questions and “in the event of a research- related harm.” Detailed language is included in section 46.116 below.

Per the rule, “if an individual was asked to consent to the storage or maintenance for secondary research use of identifiable private information or identifiable biospecimens in accordance with the proposed broad consent provisions and such individual refused to consent, the IRB would be prohibited from waiving informed consent for the storage, maintenance or secondary research use of such biospecimens and information.” A concern is that broad consent sought for one study with one type of form and set of conditions might then apply to other departments and studies using different forms with different information. This would require tracking at the institutional level. Per the preamble, tracking is expected to be managed by investigators or teams of investigators but over time tracked at the institutional level. This would suggest that refusal to consent might be applicable to studies using a particular consent form, particularly as the information provided for the six additional elements of consent will vary by study, but this requires follow-up. Many institutions with biorepositories currently employ broad consent via multiple forms from various departments. Per the preamble, broad consent and institution-wide tracking are expected to be pursued only in situations where it yields net benefits. With respect to waiver, per 46.116(f)(3)(iii) in order for an IRB to waive or alter consent it must find and document that the research could not practicably be carried out without using information or biospecimens in an identifiable format.

Per the final rule, “An IRB may approve a research proposal in which an investigator will obtain information or biospecimens for the purpose of screening, recruiting, or determining the eligibility of prospective subjects without the informed consent” if certain conditions are met.

**Informed Consent**

The final rule indicates that the prospective subject or legally authorized representa-
tive must be provided with the information that a reasonable person would want to have in order to make an informed decision about whether to participate, and an opportunity to discuss that information. See detailed information in section 46.116 below. Per the preamble, “the final rule does not adopt a requirement that certain information be included only in the appendices.” “In general, our expectation is that this initial presentation of the key pieces of information will be relatively short. This section of the consent could, in appropriate circumstances, include a summary of relevant pieces of information that are explained in greater detail later in the consent form.” The preamble also notes, however, that “information included at the beginning need not be repeated later in the body of the informed consent.” Additional details on expectations are included in the preamble. Further guidance may be provided in the future.

Additional elements of informed consent have been added. The final rule adds a requirement for language indicating that identifiers might be removed from identifiable private information or biospecimens and whether such information or biospecimens could or will not be used for future research studies without additional informed consent. In addition, “when appropriate,” one or more of the following elements of information are to be provided: information on whether biospecimens will be used for commercial profit; whether results will be disclosed to the subject; and whether the research might include whole genome sequencing. See detailed language in section 46.116 below. Per the preamble, the final rule does not include an element providing subjects or their representatives “the option to consent or refuse to consent to being re-contacted to obtain additional information or biospecimens, or for future research” as proposed in the NPRM.

The final rule allows waiver of consent if subjects are members of “a distinct cultural group or community for whom signing documents is not the norm” where there is no more than minimal risk of harm and there is an appropriate alternative method for documenting informed consent.

With respect to posting clinical trial consent forms, the final rule includes a requirement that a copy of an IRB approved consent form for clinical trials conducted or supported by a Common Rule department or agency be posted by the awardee or agency in a publicly available federal repository. There are no restrictions on which version must be posted. Posting can take place any time after recruitment closes but not later than 60 days after the last study visit by any subject. See information on specific changes in section 46.116 below. The final rule allows for redaction. “If the Federal department or agency supporting or conducting the clinical trial determines that certain information should not be made publicly available on a Federal website (e.g. confidential commercial information), such Federal department or agency may permit or require redactions to the information posted.” Per the preamble, “in rare instances, it could be the case that the federal department or agency would determine that the very existence of a particular clinical trial should not be publicly disclosed, in which case no posting related to such a trial would be required.” The preamble suggests that HHS is considering whether to use ClinicalTrials.gov as the repository.
Exclusions and Exemptions

The final rule does not include the proposed concept of “excluded” activities. The rule modifies the definition of research, “what constitutes research.” Under the definition of research, the rule identifies activities that do not meet the definition of research (are excluded; per the preamble, “explicitly removes four categories of activities that would meet that definition”), including: “Scholarly and journalistic activities (e.g., oral history, journalism, biography, literary criticism, legal research and historical scholarship)...that focus directly on the specific individuals about whom the information is collected.”; public health surveillance activities authorized by a public health authority to assess onsets of disease outbreaks or conditions of public health importance.; and certain criminal justice and intelligence activities. See changes to the definition of research in 46.103. Per the preamble, the proposed exclusion in the NPRM for QA/QI activities was dropped “because it could create more confusion than it resolved” and “might have inadvertently created inappropriate obstacles” to those activities that should not fall under the rule. The proposed exclusion of program improvement activities was not included for similar reasons.

The rule adds to and modifies existing exemptions. Eight categories of research are considered exempt (previously six). Some “exempt” activities now require limited IRB review. See information on specific changes in section 46.104 below. This includes modifying previous exemptions to allow use of identifiable information with limited IRB review; inclusion of benign behavioral interventions; and storage, maintenance and secondary use of identifiable private information and identifiable biospecimens where broad consent is obtained consistent with the final rule, including six additional consent elements. Secondary research using identifiable private information or identifiable biospecimens without consent is exempted if the research only involves collection and analysis of identifiable information regulated under HIPAA or non-research government information in compliance with applicable federal requirements. A decision tool for exemptions was not included. Per the preamble, such a tool may be developed at a future date. Use would be voluntary and it would be publicly vetted.

Continuing Review

Per the preamble, “continuing review is eliminated for all studies that undergo expedited review, unless the reviewer explicitly justifies why continuing review would enhance protection of research subjects.” Continuing review has also been eliminated for research that has progressed to the point that it involves only data analysis or “accessing follow-up clinical data from procedures that subjects would undergo as part of clinical care.” See information on specific changes to section 46.109 below. Per 46.115, the reviewer must “provide a rationale for conducting continuing review of research that otherwise would not require continuing review as described in 46.109(f)(1).” As noted in the preamble, the final rule does not require investigators to provide annual confirmation to the IRB that research is ongoing and that no changes have been made.

Per the preamble, “the final rule does not adopt the privacy and security provi-
sions proposed in the NPRM, but rather retains and acknowledges the IRB’s role in ensuring that privacy safeguards are appropriate for the research studies that require IRB review.” The final rule includes a new provision that requires the Secretary of HHS to issue guidance to assist IRBs in assuring appropriate privacy and security safeguards. See section 46.111. Per the preamble, the guidance might address: the extent to which identifiable private information is or has been de-identified and the risk that it can be re-identified; the use of the information; the extent to which it will be shared, transferred to a third party or otherwise disclosed; the likely retention period; the security controls that are in place to protect confidentiality; and, the potential risk of harm should the information be lost, stolen, compromised or “otherwise used in a way contrary to the contours of the research under the exemption.”

**Extending the Common Rule to All Clinical Trials**

The final rule does not extend coverage to non-federally funded clinical trials.

**Privacy and Security Safeguards**

Per the preamble, “the final rule does not adopt the privacy and security provisions proposed in the NPRM, but rather retains and acknowledges the IRB’s role in ensuring that privacy safeguards are appropriate for the research studies that require IRB review.” The final rule includes a new provision that requires the Secretary of HHS to issue guidance to assist IRBs in assuring appropriate privacy and security safeguards. See section 46.111. Per the preamble, the guidance might address: the extent to which identifiable private information is or has been de-identified and the risk that it can be re-identified; the use of the information; the extent to which it will be shared, transferred to a third party or otherwise disclosed; the likely retention period; the security controls that are in place to protect confidentiality; and, the potential risk of harm should the information be lost, stolen, compromised or “otherwise used in a way contrary to the contours of the research under the exemption.”

**Cooperative Research**

Mandates the use of a single IRB for multisite studies covered by the policy. OHRP is suggesting that agencies have significant flexibility in implementing this policy. From the HHS press release: “The proposal from the NPRM has been modified, however, to add substantial increased flexibility in now allowing broad groups of studies (instead of just specific studies) to be removed from this requirement.”

Senior OHRP officials have suggested that agencies could determine that all of their research should be removed from this requirement but the rule does not make this explicit. The following is the new language: “The following research is not subject to this provision: (ii) Research for which any Federal department or agency supporting or conducting the research determines and documents that the use of a single IRB is not appropriate for the particular context.” The final language allows the lead institution to propose the reviewing IRB, “subject to the acceptance of the federal department or agency supporting the research.” The effective date for this provision is 01/20/20. See information on specific changes to section 46.114 below.
Regulatory Impact

The final rule suggests net cost savings of over $1 billion over a ten year period. For cooperative research the analysis suggests $538 million in benefits over 10 years and $157 million in costs, or $381 million in net benefits. The analysis assumes a reduction in burden associated with site-specific review but an increase in burden in the form of coordination with other sites. Estimated quantified benefits were “revised downward by 27%.” The rule estimates that investigators will spend half as much time engaging in the review process. The preamble to the final rule suggests that “RIA comments did not provide the evidence necessary to improve our estimates, and thus, limited changes have been made.” Per the impact analysis, “some cost shifting may occur as certain IRBs assume the role of reviewing IRB. However, these will be offset by savings at other IRBs that are no longer required to conduct additional reviews of the same research study.” “It is expected that, over time, reliance agreements and other methods of documenting external reliance will become standardized, which will result in reduced costs associated with multiple reviews and time savings for investigators who no longer must wait for multiple reviews.” As part of the impact analysis it is estimated that 40,523 multisite studies are reviewed each year and that 40% are funded by NIH. The analysis also suggests $798 million in benefits for the expansion of exempt categories of research and $326 million for eliminating the requirement that the grant application undergo IRB review and approval.

Other Changes of Interest

The final rule notes the intent to “eventually’’ amend subparts B, C, D and E and to consider updates to FDA and other relevant federal regulations.

HHS plans to “implement the proposed nonregulatory change to the assurance mechanism to eliminate the voluntary extension of the FWA to nonfederally funded research.” The preamble notes that institutional policy can require IRB review of research not funded by Common Rule departments and agencies. Per the preamble, this change is expected to encourage institutions to explore flexible approaches to overseeing low-risk research not covered by the Common Rule.

The final rule eliminates the requirement that “grant applications undergo IRB review and approval for the purpose of certification.” See section 46.102.

The Secretary’s list of categories of research that may be reviewed through expedited review will be evaluated at least every 8 years. Proposed changes to the list will be published in the Federal Register to allow for public comment. If a reviewer determines that a study on the list involves more than minimal risk and is not eligible for expedited review this must be documented.

The final rule removes pregnant women as an example of populations that are potentially vulnerable to coercion or undue influence.

46.101 To what does this policy apply?

The following language is omitted:

“Research that is conducted or supported by a federal department or agency,
whether or not it is regulated as defined in §46.102, must comply with all sections of this policy.”

“Research that is neither conducted nor supported by a federal department or agency but is subject to regulation as defined in §46.102(e) must be reviewed and approved, in compliance with §46.101, §46.102, and §46.107 through §46.117 of this policy, by an institutional review board (IRB) that operates in accordance with the pertinent requirements of this policy.”

Agency waiver of applicability now requires identification of conditions to which it will be applied, justification and how it is consistent with the principles of the Belmont Report.

The final rule clarifies that the Common Rule does not affect AI/AN tribal law that may provide additional protections for human subjects.

As proposed in the NPRM, for the purposes of harmonization, federal guidance “shall be issued only after consultation” with other federal agencies, unless it is not feasible.

46.102 Assuring compliance

The final rule eliminates the requirement that “grant applications undergo IRB review and approval for the purpose of certification”; the requirement that institutions provide a statement of ethical principles by which they will abide by as part of the assurance; and the requirement to designate one or more IRBs on an institution’s FWA. An updated list of IRB members is no longer required to be submitted with an institution’s assurance; instead the institution must maintain a current list. The rule removes the requirement that a department or agency head’s evaluation of the assurance consider the adequacy of the proposed IRB with respect to the anticipated scope of activities and types of populations anticipated. It requires that for review that takes place by an IRB not operated by an institution, the institution and organization operating the IRB “must document the institution’s reliance on the IRB for its research oversight.”

46.103 Definitions

The final rule includes a definition for “clinical trial” (adopted the NPRM definition); “Federal department or agency”; “public health authority” (per the preamble, to clarify the scope of activities removed from the definition of research); “written or in writing” (per the preamble to clarify that these terms include electronic formats and other media) and “identifiable biospecimen” (previously considered part of “identifiable private information”).

The definition of “identifiable biospecimen” and “identifiable private information” will be re-examined within one year and every four years thereafter (upon consultation with appropriate experts and by collaboration among federal agencies and departments). “If appropriate and permitted by law, such Federal departments and agencies may alter the interpretation of these terms, including through the use of guidance.” A similar process will be followed to “assess whether there are analytic technologies or techniques that should be considered by investigators to generate
"identifiable private information," or "identifiable biospecimens." "Any such technologies or techniques will be included on a list of technologies or techniques that produce identifiable private information or identifiable biospecimens. This list will be published in the Federal Register after notice and an opportunity for public comment. The Secretary, HHS, shall maintain the list on a publicly accessible website.” Per the preamble, recommendations might then be made with respect to consent and privacy and data security protections. These technologies might then only be used where consent has been provided or where an IRB has waived consent. Notice and comment would take place before a technology or technique was placed on this list. Per the preamble, “the expectation is that whole genome sequencing will be one of the first technologies to be evaluated to determine whether it should be placed on this list.” Further, “...apart from the consequences of placing technologies and techniques on the new list, the most significant effect of 46.102(e)(7) may be the issuance of guidance from time to time that facilitates understanding of and compliance with existing interpretations.”

The definition of “human subject” has been changed from:

“(f) Human subject means a living individual about whom an investigator (whether professional or student) conducting research obtains
(1) Data through intervention or interaction with the individual, or
(2) Identifiable private information.”

To:

“(e)(1) Human subject means a living individual about whom an investigator (whether professional or student) conducting research:
(i) Obtains information or biospecimens through intervention or interaction with the individual, and uses, studies, or analyzes the information or biospecimens; or
(ii) Obtains, uses, studies, analyzes, or generates identifiable private information or identifiable biospecimens.”

Under the definition of research, the rule identifies activities that do not meet the definition of research (are excluded; per the preamble, “explicitly removes four categories of activities that would meet that definition”), including: “Scholarly and journalistic activities (e.g., oral history, journalism, biography, literary criticism, legal research and historical scholarship)...that focus directly on the specific individuals about whom the information is collected.”; public health surveillance activities authorized by a public health authority to assess onsets of disease outbreaks or conditions of public health importance.; and certain criminal justice and intelligence activities.

The term “legally authorized representative” has been modified to address jurisdictions without applicable law and now refers to institutions’ policies.

**46.104 Exempt Research**

For research that includes only interactions involving educational tests, survey or interview procedures or observation of public behavior, identifiable information can
now be used with limited IRB review and appropriate privacy and confidentiality protections.

An exemption is added for research involving benign behavioral interventions (defined in the revised rule) in conjunction with the collection of information from an adult subject if the subject prospectively agrees and one of three criteria are met. The exemption is not applicable for research involving deceit unless the subject authorizes deception through prospective agreement.

Storage or maintenance of identifiable private information or biospecimens for potential secondary research use (for which broad consent is required) is exempt if an IRB conducts a limited review. Secondary research use of identifiable private information or biospecimens is exempt if broad consent for storage, maintenance and secondary research use was obtained; documentation of informed consent or waiver of consent was obtained; an IRB determines that the research is within the scope of the broad consent; and the study plan does not include return of research results. Secondary research use of identifiable private information and identifiable biospecimens does not require consent if the information is publicly available; is recorded in a way that the identity of the subject cannot readily be ascertained and the investigator does not contact or re-identify subjects; is identifiable health information regulated under HIPAA used for “healthcare operations” or “public health activities”; and research conducted by or on behalf of a federal department or agency using government-generated or government-collected information and maintained in information technology in compliance with applicable laws/privacy protections.

Federal departments or agencies conducting or supporting demonstration projects must publish a list of projects prior to their commencement.

**46.105 and 46.106 Reserved**
No change.

**46.107 IRB Membership**
Removed considerations of gender and profession.

**46.108 IRB Functions and Operations**
No change.

**46.109 IRB Review of Research**
*The following language on continuing review has been added as proposed in the NPRM:

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“(f)(1) Unless an IRB determines otherwise, continuing review of research is not required in the following circumstances:
   (i) Research eligible for expedited review in accordance with §__.110; [expedited review procedures]
   (ii) Research reviewed by the IRB in accordance with the limited IRB review described
        in §__.104(d)(2)(iii), (d)(3)(i)(C), or (d)(7) or (8); [exemptions requir-
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ing limited IRB review] (iii) Research that has progressed to the point that it involves only one or both of the following, which are part of the IRB-approved study:

(A) Data analysis, including analysis of identifiable private information or identifiable biospecimens, or

(B) Accessing follow-up clinical data from procedures that subjects would undergo as part of clinical care.”

Per the preamble, “continuing review is eliminated for all studies that undergo expedited review, unless the reviewer explicitly justifies why continuing review would enhance protection of research subjects.”

The following has been added:

“(g) An IRB shall have authority to observe or have a third party observe the consent process and the research.”

The language at 46.109(a) clarifies that IRBs have the authority to conduct limited review with respect to certain categories of exempt research.

46.110 Expedited review procedures for certain kinds of research involving no more than minimal risk, and for minor changes in approved research.

*Changed to indicate that the Secretary’s list of categories of research that may be reviewed through expedited review will be evaluated at least every 8 years [previously “amended as appropriate”]. Per the preamble, the proposed changes to the list will be published in the Federal Register to allow for public comment.

*A third condition for expedited review has been added:

“(iii) Research for which limited IRB review is a condition of exemption under §__.104(d)(2)(iii), (d)(3)(i)(C), and (d)(7) and (8).”

Per the preamble, a study is eligible for expedited review if it involves only activities on the Secretary’s list, unless the reviewer determines that the study involves more than minimal risk and documents the rationale. This documentation requirement is new. It is suggested that this will lead to greater consistency across institutions and could provide a basis for future determinations about the appropriateness of the list.

46.111 Criteria for IRB approval of research.

*Removed pregnant women and “handicapped or physically disabled individuals” as examples of populations that are potentially vulnerable to coercion or undue influence. Replaced “mentally disabled persons” with “individuals with impaired decision-making ability.”

Added that informed consent will be appropriately documented or “appropriately waived” in accordance with the regulations.

*With respect to privacy of subjects and confidentiality of data, the following was added:
*(i) The Secretary of HHS will, after consultation with the Office of Management and Budget’s privacy office and other Federal departments and agencies that have adopted this policy, issue guidance to assist IRBs in assessing what provisions are adequate to protect the privacy of subjects and to maintain the confidentiality of data. Per the preamble, the guidance might address: the extent to which identifiable private information is or has been deidentified and the risk that it can be reidentified; the use of the information; the extent to which it will be shared, transferred to a third party or otherwise disclosed; the likely retention period; the security controls that are in place to protect confidentiality; and, the potential risk of harm should the information be lost, stolen, compromised or “otherwise used in a way contrary to the contours of the research under the exemption.”

*Adds the following:

“(8) For purposes of conducting the limited IRB review required by §__.104(d)(7)), the IRB need not make the determinations at paragraphs (a)(1) through (7) of this section, and shall make the following determinations:

(i) Broad consent for storage, maintenance, and secondary research use of identifiable private information or identifiable biospecimens is obtained in accordance with the requirements of §__.116(a)(1)-(4), (a) (6), and (d);
(ii) Broad consent is appropriately documented or waiver of documentation is appropriate, in accordance with §__.117; and
(iii) If there is a change made for research purposes in the way the identifiable private information or identifiable biospecimens are stored or maintained, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of data.”

46.112 Review by an institution.
No changes.

46.113 Suspension or termination of IRB approval of research.
No Changes

46.114 Cooperative research.
Changed the language to mandate single IRB approval for studies covered under the policy and involving more than one U.S. institution:

Previous language:

“With the approval of the department or agency head, an institution participating in a cooperative project may enter into a joint review arrangement, rely upon the review of another qualified IRB, or make similar arrangements for avoiding duplication of effort.”
New language:

“(b)(1) Any institution located in the United States that is engaged in cooperative research must rely upon approval by a single IRB for that portion of the research that is conducted in the United States. The reviewing IRB will be identified by the Federal department or agency supporting or conducting the research or proposed by the lead institution subject to the acceptance of the Federal department or agency supporting the research.”

OHRP is suggesting that agencies have significant flexibility in implementing this policy. From the HHS press release: “The proposal from the NPRM has been modified, however, to add substantial increased flexibility in now allowing broad groups of studies (instead of just specific studies) to be removed from this requirement.” A senior OHRP official suggested that agencies could determine that all of their research should be removed from this requirement but the rule does not make this explicit. The following is the new language:

“(2) The following research is not subject to this provision:

(i) Cooperative research for which more than single IRB review is required by law (including tribal law passed by the official governing body of an American Indian or Alaska Native tribe); or

*(ii) Research for which any Federal department or agency supporting or conducting the research determines and documents that the use of a single IRB is not appropriate for the particular context.”

The final language allows the lead institution to propose the reviewing IRB, “subject to the acceptance of the federal department or agency supporting the research.” The effective date for single IRB compliance is delayed until 1/20/2020.

46.115 IRB records.

*To records of continuing review adds: “including the rationale for conducting continuing review of research that otherwise would not require continuing review as described in §__.109(f)(1).”

*Adds the following language:

“(8) The rationale for an expedited reviewer’s determination under §__.110(b)(1)(i) that research appearing on the expedited review list described in §__.110(a) is more than minimal risk.”

“(9) Documentation specifying the responsibilities that an institution and an organization operating an IRB each will undertake to ensure compliance with the requirements of this policy, as described in §__.103(e).”

Indicates that records can be maintained electronically or in printed form.

46.116 General requirements for informed consent.

The following language has been added:

“(4) The prospective subject or the legally authorized representa-
tive must be provided with the information that a reasonable person would want to have in order to make an informed decision about whether to participate, and an opportunity to discuss that information.

(5) Except for broad consent obtained in accordance with paragraph (d) of this section:

(i) Informed consent must begin with a concise and focused presentation of the key information that is most likely to assist a prospective subject or legally authorized representative in understanding the reasons why one might or might not want to participate in the research. This part of the informed consent must be organized and presented in a way that facilitates comprehension.

(ii) Informed consent as a whole must present information in sufficient detail relating to the research, and must be organized and presented in a way that does not merely provide lists of isolated facts, but rather facilitates the prospective subject’s or legally authorized representative’s understanding of the reasons why one might participate.”

*The following language has been added to “Basic elements of informed consent” (“the following information shall be provided” except as otherwise provided). Added to increase transparency:

“(9) One of the following statements about any research that involves the collection of identifiable private information or identifiable biospecimens:

(i) A statement that identifiers might be removed from the identifiable private information or identifiable biospecimens and that, after such removal, the information or biospecimens could be used for future research studies or distributed to another investigator for future research studies without additional informed consent from the subject or the legally authorized representative, if this might be a possibility; or

(ii) A statement that the subject’s information or biospecimens collected as part of the research, even if identifiers are removed, will not be used or distributed for future research studies.”

*The following language has been added to “Additional elements of informed consent” (where “one or more of the following elements of information, when appropriate, shall also be provided to each subject or the legally authorized representative”):

“(7) A statement that the subject’s biospecimens (even if identifiers are removed) may be used for commercial profit and whether the subject will or will not share in this commercial profit;

(8) A statement regarding whether clinically relevant research results, including individual research results, will be disclosed to subjects,
and if so, under what conditions; and

(9) For research involving biospecimens, whether the research will (if known) or might include whole genome sequencing (i.e., sequencing of a human germline or somatic specimen with the intent to generate the genome or exome sequence of that specimen).”

Per the preamble, the final rule does not include an element providing subjects or their representatives “the option to consent or refuse to consent to being re-contacted to obtain additional information or biospecimens, or for future research.”

*The following language has been added*:

“(d) Elements of broad consent for the storage, maintenance, and secondary research use of identifiable private information or identifiable biospecimens. Broad consent for the storage, maintenance, and secondary research use of identifiable private information or identifiable biospecimens (collected for either research studies other than the proposed research or nonresearch purposes) *is permitted as an alternative to the informed consent requirements in paragraphs (b) and (c) of this section. If the subject or the legally authorized representative is asked to provide broad consent, the following shall be provided to each subject or the subject’s legally authorized representative:

(1) The information required in paragraphs (b)(2), (b)(3), (b)(5), and (b)(8) [basic elements of informed consent] and, when appropriate, (c)(7) and (9) of this section [use for commercial profit or whole genome sequencing];

*(2) A general description of the types of research that may be conducted with the identifiable private information or identifiable biospecimens. This description must include sufficient information such that a reasonable person would expect that the broad consent would permit the types of research conducted;

(3) A description of the identifiable private information or identifiable biospecimens that might be used in research, whether sharing of identifiable private information or identifiable biospecimens might occur, and the types of institutions or researchers that might conduct research with the identifiable private information or identifiable biospecimens;

(4) A description of the period of time that the identifiable private information or identifiable biospecimens may be stored and maintained (which period of time could be indefinite), and a description of the period of time that the identifiable private information or identifiable biospecimens may be used for research purposes (which period of time could be indefinite); (5) Unless the subject or legally authorized representative will be provided details about specific research studies, a statement that they will not be informed of the details of any specific research studies that might be conducted using
the subject’s identifiable private information or identifiable biospecimens, including the purposes of the research, and that they might have chosen not to consent to some of those specific research studies;

(6) Unless it is known that clinically relevant research results, including individual research results, will be disclosed to the subject in all circumstances, a statement that such results may not be disclosed to the subject; and

(7) An explanation of whom to contact for answers to questions about the subject’s rights and about storage and use of the subject’s identifiable private information or identifiable biospecimens, and whom to contact in the event of a research-related harm.”

Per the preamble, broad consent may be obtained for the use of identifiable private information or identifiable biospecimens for storage and maintenance for secondary research use and secondary research use in lieu of obtaining study-specific informed consent. Investigators can continue to use biospecimens that are coded or to seek waiver of consent for use of biospecimens with identifiers retained.

“(e) Waiver or alteration of consent in research involving public benefit and service programs conducted by or subject to the approval of state or local officials—(1) Waiver. An IRB may waive the requirement to obtain informed consent for research under paragraphs (a) through (c) of this section, provided the IRB satisfies the requirements of paragraph (e)(3) of this Section [requirements for waiver and alteration]. *If an individual was asked to provide broad consent for the storage, maintenance, and secondary research use of identifiable private information or identifiable biospecimens in accordance with the requirements at paragraph (d) of this section, and refused to consent, an IRB cannot waive consent for the storage, maintenance, or secondary research use of the identifiable private information or identifiable biospecimens."

“(2) Alteration. An IRB may approve a consent procedure that omits some, or alters some or all, of the elements of informed consent set forth in paragraphs (b) and (c) of this section provided the IRB satisfies the requirements of paragraph (e)(3) of this section [requirements for waiver and alteration]. An IRB may not omit or alter any of the requirements described in paragraph (a) of this section. If a broad consent procedure is used, an IRB may not omit or alter any of the elements required under paragraph (d) of this section.”

Under “Requirements for waiver and alteration” (in order for an IRB to waive or alter consent it must find and document that) adds:

“(iii) If the research involves using identifiable private information or identifiable biospecimens, the research could not practicably be carried out without using such information or biospecimens in an identifiable format;”
The following language has been added:

“(g) Screening, recruiting, or determining eligibility. An IRB may approve a research proposal in which an investigator will obtain information or biospecimens for the purpose of screening, recruiting, or determining the eligibility of prospective subjects without the informed consent of the prospective subject or the subject’s legally authorized representative, if either of the following conditions are met:

(1) The investigator will obtain information through oral or written communication with the prospective subject or legally authorized representative, or

(2) The investigator will obtain identifiable private information or identifiable biospecimens by accessing records or stored identifiable biospecimens.”

“(h) Posting of clinical trial consent form. (1) For each clinical trial conducted or supported by a Federal department or agency, one IRB-approved informed consent form used to enroll subjects must be posted by the awardee or the Federal department or agency component conducting the trial on a publicly available Federal website that will be established as a repository for such informed consent forms.

(2) If the Federal department or agency supporting or conducting the clinical trial determines that certain information should not be made publicly available on a Federal website, e.g., confidential commercial information, such Federal department or agency may permit or require redactions to the information posted.

(3) The informed consent form must be posted on the Federal website after the clinical trial is closed to recruitment, and no later than 60 days after the last study visit by any subject, as required by the protocol.”

46.117 Documentation of informed consent.

Minor variations to the language and adds the following (IRBs may waive the requirement for signed informed consent if): “(iii) If the subjects or legally authorized representatives are members of a distinct cultural group or community in which signing forms is not the norm, that the research presents no more than minimal risk of harm to subjects and provided there is an appropriate alternative mechanism for documenting that informed consent was obtained.”

46.118 Applications and proposals lacking definite plans for involvement of human subjects.

No changes (minor language variation).

46.119 Research undertaken without the intention of involving human subjects.

Adds: “Except for research waived under §__.101(i) or exempted under §__.104,”
46.120 Evaluation and disposition of applications and proposals for research to be conducted or supported by a federal department or agency.
No changes.

46.121 Reserved.
No changes.

46.122 Use of Federal Funds
No changes.

46.123 Early termination of research support: evaluation of applications and proposals.
No changes.

46.124 Conditions.
No changes.

Common Rule Summary Table

<table>
<thead>
<tr>
<th>Effective Date</th>
<th>January 19, 2018. The effective date for cooperative research is January 20, 2020.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biospecimens and Private Information</td>
<td>The final rule does not expand the definition of “human subject” to include non-identified biospecimens but does alter the definition which now includes identifiable biospecimens. Identifiable Biospecimens and identifiable private information are treated equally in the final rule and these definitions will be re-examined within one year of publication and every four years thereafter. “If appropriate and permitted by law, such Federal departments and agencies may alter the interpretation of these terms, including through the use of guidance.” A similar process will be followed to “assess whether there are analytic technologies or techniques that should be considered by investigators to generate “identifiable private information,” or “identifiable biospecimens.” The final rule does not adopt the proposal for more stringent waiver criteria that would have made waiver for secondary research use of biospecimens “very rare.”</td>
</tr>
<tr>
<td>Informed Consent</td>
<td>Per the final rule, “Informed consent must begin with a concise and focused presentation of the key information that is most likely to assist a prospective subject or legally authorized representative in understanding the reasons why one might or might not want to participate in the research.” It does not include the NPRM proposal that certain information be included only in the appendices. Additional elements of informed consent have been added, including a requirement for language indicating that identifiers might be removed from identifiable private information or identifiable biospecimens and whether such information or biospecimens might or will not be used for future research studies. In addition, “where appropriate,” information on whether biospecimens will be used for commercial profit; whether results will be disclosed to the subject; and whether the research might include whole genome sequencing. Any version of an IRB approved consent form for clinical trials conducted or supported by a Common Rule department or agency must be posted on a publicly available federal website after recruitment ends but not later than 60 days after the last study visit by any subject. The final rule allows for redaction with approval.</td>
</tr>
<tr>
<td>Exclusions and Exemptions</td>
<td>The final rule does not include the proposed concept of “excluded” activities. It modifies the definition of research, “what constitutes research,” and now names activities not considered research such as certain scholarly and journalistic (including oral history), public health surveillance and criminal justice and intelligence activities. A proposed exclusion for QA/QI activities was dropped because it “might have inadvertently created inappropriate obstacles.” The rule adds to and modifies existing exemptions. This includes modifying previous exemptions to allow use of identifiable information with limited IRB review; inclusion of benign behavioral interventions; and storage, maintenance and secondary use of identifiable private information and identifiable biospecimens where broad consent is obtained consistent with the final rule, including six additional consent elements. Secondary research using identifiable private information or identifiable biospecimens without consent is exempted if the research only involves collection and analysis of identifiable information regulated under HIPAA or non-research government information in compliance with applicable federal requirements. A decision tool was not included but may be developed at a future date.</td>
</tr>
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</table>
### Continuing Review

Continuing review is eliminated for all studies that undergo expedited review and research that has progressed to the point that it involves only data analysis or accessing follow-up clinical data as part of clinical care, unless the reviewer documents a rationale for conducting continuing review. The final rule does not require investigators to provide annual confirmation to the IRB that research is ongoing and that no changes have been made.

### Extending Coverage

The final rule does not extend coverage to non-federally funded clinical trials.

### Cooperative Research

The final rule mandates the use of a single IRB for multisite studies. Federal departments or agencies supporting or conducting the research can determine that the use of a single IRB is not appropriate for particular contexts. The final language allows the lead institution to propose the reviewing IRB, “subject to the acceptance of the federal department or agency supporting the research.” The agreement for oversight between the institution and the organization operating the IRB must be documented and include the responsibilities of each.

### Privacy and Security Safeguards

Per the preamble, “the final rule does not adopt the privacy and security provisions proposed ...but rather retains and acknowledges the IRB’s role in ensuring that privacy safeguards are appropriate...” The final rule includes a new provision that requires the Secretary of HHS to issue guidance to assist IRBs in assuring appropriate privacy and security safeguards.

### Other Changes

HHS plans to eliminate the voluntary extension of the FWA. The final rule eliminates the requirement that grant applications undergo IRB review and approval. The Secretary’s list of categories of research eligible for expedited review will be evaluated at least every 8 years.
\section*{Practical Tools}

This section includes practical guidance and tools on specific research compliance topics. These materials are culled from a variety of authoritative sources.

\section*{Financial Conflict of Interest Compliance}

In compliance with the National Institutes of Health’s (NIH) “Objectivity in Research” regulations promulgated in 1995, colleges and universities have created appropriate policies and practices to ensure compliant education, disclosure, management (or divestment), and reporting of financial interests associated with its investigators receiving funding from the Public Health service (PHS), of which NIH is a part. Similar requirements from the National Science Foundation (NSF) were issued in 1994.

\begin{reminder}
Currently, only a few federal agencies have financial conflict of interest regulations:


FDA, “Financial Disclosure by Clinical Investigators,”
www.access.gpo.gov/nara/cfr/waisidx_00/21cfr54_00.html

HHS final guidance document on FCOI for research involving human subjects,
www.hhs.gov/ohrp/humansubjects/firreltn/fguid.pdf
\end{reminder}

\section*{New Developments at NIH}


Published in the Aug. 25 Federal Register, the rule also updates the existing regulations because “interactions among government, research

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institutions, and the private sector have become increasingly complex. This complexity, as well as a need to strengthen accountability, led to changes that expand and add transparency to” principal investigators’ disclosure of significant financial interests and “enhance” compliance and institutional oversight and management of FCOI. In a recent blog posting, NIH Office of Extramural Research Deputy Director Sally Rockey said that also driving the changes “has been increased scrutiny of investigators’ financial relationships from Congress and the public” (http://nexus.od.nih.gov/all/rock-talk).

Key changes in the new rules create “an additional layer of careful oversight,” NIH Director Francis Collins said. Rocky added that for a number of requirements, they take a “more rigorous approach.” For the most part, the final rule closely follows the notice of proposed rulemaking published in May 2010. (For further discussion of the new regulations and FCOI and biomedical research, see ¶2130.1)

Compliance Date for New Rule. Although the rule has an “effective” date of September 26, 2011, the “compliance dates” for applicant institutions are August 24, 2012, and “immediately” after an institution makes its FCOI policy publicly accessible as described in the regulation. NIH, decided not to extend the implementation date beyond one year, as suggested by several commenters.

The revised regulations will apply to each grant or cooperative agreement with a Notice of Award issue date after the compliance date of the final rule (including noncompeting continuations) and to research solicitations issued and contracts awarded subsequent to that date.

Until August 2012, grantees are to remain in compliance with the 1995 regulations.

What Do the Regulations Say?
The PHS and NSF policies are consistent with each other, although the procedures for compliance differ. While only these federal agencies have promulgated regulations, conflict of interest issues can arise in many arenas. Consequently, many institutions in their implementation of the regulations have expanded coverage to all federally funded projects, and a great number have expanded the requirements to cover all research projects, particularly those involving human research participants. Others have expanded the disclosure requirements to all faculty, regardless of whether or not they have external sources of support for their research and scholarly activities.

Institutions have taken a variety of approaches with respect to conflict disclosures. Some institutions have had their designated institutional official appoint a
committee to review the disclosures made and make recommendations on appropriate action. Others have left the review and disposition to one institutional official. One of the most difficult issues is often that of determining when a significant financial interest exists and the requirements to manage, reduce, or eliminate the conflict. In many instances, this is a subjective determination, and, for that reason, guidelines have been developed for both the disclosure reviewers and the individual faculty.

Once implementation of the new PHS regulations begins, PHS requirements will differ from those of NSF.

**Terminology.** In understanding the Public Health Service (PHS) requirements, the regulations use a number of definitions and accurate understanding of the requirements depends upon an accurate understanding of each term’s meaning. In PHS’s codification of its policies, the terms are defined as follows below. (The National Science Foundation definitions parallel those of PHS.)

**Investigator:** This term refers to the principal investigator and any other person who is responsible for the design, conduct, or reporting of research funded by the agency or proposed for such funding. The term includes the investigator’s spouse and dependent children.

**Research:** Research means a systematic investigation designed to develop or contribute to generalizable knowledge. The term encompasses basic and applied research and product development.

**Significant financial interest:** This is anything of monetary value, including but not limited to, salary or other payments for services (e.g., consulting fees or honoraria); equity interests (e.g., stocks, stock options, or other ownership interest); and intellectual property rights (e.g., patents, copyrights and royalties from such rights). The term does not include

1. salary, royalties, or other remuneration from the applicant institution;
2. any ownership interests in the institution, if the institution is an applicant under the Small Business Innovation Research (SBIR) program;
3. income from seminars, lectures, or teaching engagements sponsored by public or nonprofit entities;
4. income from service on advisory committees or review panels for public or nonprofit entities;
5. an equity interest that when aggregated for the investigator and the investigator’s spouse and dependent children, meets both of the following tests: does not exceed $10,000 in value as determined through reference to public prices or other reasonable measure of fair market value, and does not represent more than a five percent ownership interest in any single entity; or
6. salary, royalties, or other payments that when aggregated for the investigator and the investigator’s spouse and dependent children over the next twelve months, are not expected to exceed $10,000.
**Institutional Responsibilities.** Under the regulations, which are applicable only to investigators with PHS or NSF research support, institutions have certain responsibilities including the following

- Maintaining a written and enforced policy that complies with the regulations
- Informing each investigator of the policy and their reporting responsibilities under the policy
- Taking reasonable steps to ensure that subawardees, contractors, or collaborators comply either with your institutional policy or equivalent policies at their home organizations
- Designating an institutional official to solicit and review financial disclosure statements from each investigator who is planning on participating in the appropriate agency’s funded research programs
- At the time of application, requiring an investigator to have submitted a listing of his/her known “significant financial interests,” along with those of his/her spouse and dependent children (The statement is applicable to personal remuneration and/or those interests in entities that would reasonably appear to be affected by the proposed research project.)
- Requiring that during the course of the research, financial disclosures be updated at least annually or when reportable “significant financial interests” occur
- Providing guidance for the designated official(s) in identifying conflicting interests and in taking the necessary actions to manage, reduce, or eliminate such conflicts
- Maintaining records of all financial disclosures and actions taken on the same for at least three years beyond the date of submission of the financial expenditures report for the project
- Establishing appropriate and adequate enforcement mechanisms including sanctions, when appropriate

When each proposal is submitted, the institution must certify it has met all the above requirements. In the case of proposals submitted to the PHS, the certification includes assurance that the institution will report the existence of any conflict of interest and that the interest has been managed, reduced, or eliminated prior to the expenditure of any project funds. The report to the agency only has to note the existence of a conflict; the institution is not required to provide details. The certification also includes the institution’s agreement to make information available to the funding agency, upon request, which elaborates on the conflict and identifies how the institution will manage, reduce, or eliminate the conflict.

**Managing Conflicts.** The regulations require the designated official to review all financial disclosures made and to make a determination with respect to managing, reducing, or eliminating any conflict identified. The regulations specifically state “a conflict of interest exists when the designated official(s) reasonably determines
that a Significant Financial Interest could directly and significantly affect the design, conduct, or reporting of the … funded research."

The following are examples of conditions or restrictions that can be put into place to either manage or eliminate conflicts:

◆ public disclosures of significant financial interest;
◆ monitoring of research by independent reviewers;
◆ disqualification from participation in all or a portion of the research funded by the agency;
◆ divestiture of significant financial interests; or
◆ severance of relationships that create actual or potential conflicts.

Assuring Compliance. At a minimum, an institution’s compliance with these regulations should include

◆ a written and enforceable policy;
◆ a requirement for disclosure; and
◆ a review and appropriate disposition of each disclosure and any interests identified therein.

Institutional Conflicts of Interest

Institutional conflict of interest (iCOI) is becoming a more popular focus of attention. In its August 2011 final rule amending its 1995 FCOI regulations for grantees and contractors, NIH said it is a significant and timely topic worthy of serious consideration, but it declined to regulate such conflicts at this time.

Two of the biggest hurdles at institutions considering such a policy are the review and determination of a conflict and the question of who will make such a review and determination. The definition of an institution’s financial interest that may lead to conflict will depend upon institutional needs and culture, and it could be defined more broadly than financial interests directly related to research. Typically, iCOI policies will encompass the following types of financial interests:

◆ University ownership of equity interests, other corporate securities, or entitlements to entities that sponsor research at the university or that are obtained through technology transfer transactions with such entities. As with individual conflict of interest, institutions may differentiate between equity interests that are held in non-publicly vs. publicly traded companies.

◆ University receipt of royalties (or potential royalties) that depend upon future sales of products or technology.

◆ Master agreements with a company sponsor that provide significant and long-term funding support that may give, or appear to give, special preferences to the company.

◆ University receipt of substantial or recurring gifts, equipment donations, or promises thereof that may raise questions about the influence of the company on
the university’s research, or if there is an actual or implied quid pro quo owed to the donor that relates to, or could give the appearance of relating to, the research.

◆ Procurement of goods and services from corporations in which the university has a financial interest.

◆ University participation or investment in economic development corporations or venture capital funds.

The Council on Governmental Relations has also produced a practical document on the development and implementation of iCOI policies, regardless of the emphasis of the research focus at the institution. Link: www.cogr.edu/files/publications_Conflicts.cfm.

A 2008 report from the Association of American Medical Colleges (AAMC) and the Association of American Universities (AAU) recommends that AAU institutions and AAMC schools of medicine and teaching hospitals develop and put in place an iCOI policy within two years (www.aamc.org/jointcoireport).

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**Educational DVD**

NCURA is making available for purchase a DVD of its ninety-five minute program, “Promoting Objectivity in Research: The Faculty Perspective.” The program has four modules:

- Objectivity in Research
- Intellectual Property
- Facilities Use
- Conflict of Commitment

The DVD includes a workshop guide with supplemental resources. Institutions are granted an exclusive license to use the workshop for on-campus education including posting the modules to a secure website.

Faculty are David Richardson, Pennsylvania State University; Jilda Garton, Georgia Institute of Technology; Denise McCartney, Washington University; and Lillie Ryans-Culclager, Director of Contracts, SRI International.

Link: www.nura.edu
Institutional COI: OIG Recommendations

Oversight of investigators’ financial conflicts of interest is insufficient to guarantee that federally funded research is unbiased, according to a report released in January 2011 by the Office of Inspector General of the Department of Health and Human Services. Instead, the report says, NIH should require institutions to develop their own financial conflict of interest policies and disclose to NIH conflicts that do arise, along with a management plan.

This is not the first time OIG made such a recommendation; it expressed a similar sentiment in a 2009 report (OEI-03-07-00700). The agency said the presence of institutional COIs is undisputed, and organizations such as the Institute of Medicine have recommended the adoption of policies that manage them (see www.nap.edu/catalog.php?record_id=12598). “An institution’s financial interests (for example, royalties, equity, stockholdings, and gifts) or those of its senior officials can become institutional conflicts when the financial interests pose a risk of undue influence on decisions involving the institution’s research,” OIG said.

The report includes data on 156 institutions that responded to a survey OIG undertook; of these, 52 had reported an investigator COI to NIH and 104 had not. The survey found that “although not required for institutional financial interests, 70 of 156 responding NIH grantee institutions have written policies and procedures addressing institutional interests.”

OIG called for NIH to issue regulations addressing institutional FCOIs that would include

• the definition of an institutional FCOI;

• a requirement that grantee institutions have written policies regarding the identification and oversight of such and the elements required in an institution’s policy (such as the identification and management of conflicts);

• a requirement that institutions report institutional conflicts to NIH, including reporting the details regarding the nature and management of such conflicts (details should include the value of the financial interest, a description of how the financial interest relates to the research, a description of how the institutional conflict will be managed, and a description of how the management of the institutional conflict will ensure objectivity in the research); and

• guidance on how institutional conflicts should be identified, managed, reduced, or eliminated.

Until institutional FCOI regulations are promulgated, OIG said that NIH should “encourage” grantee institutions to develop such policies.

In his response to the OIG report, NIH Director Francis Collins said that his agency agrees with OIG that institutional COI “is a significant and timely topic worthy of serious consideration.” However, Collins backed off from agreeing to regulate such conflicts at this time.

1530.2  **Responsible Conduct of Research Resources for Administrators And Others**
AIS editors

The Department of Health and Human Services Office of Research Integrity (ORI) has at its Web site an “Administrators and the Responsible Conduct of Research” tutorial. “Frequently, administrators encounter ethical decisions in an environment of competing obligations and responsibilities. In order to function effectively and make appropriate ethical decisions, administrative staff need to develop the skills to (1) identify when situations present ethical conflicts, (2) reason among possible courses of action, and (3) effectively implement their best solution to the problem” according to the preparers of the tutorial. The tutorial is designed to assist research administrators develop these skills.

Currently the tutorial offers modules in five areas:

* Conflict of interest
* Financial management
* Mentor-trainee responsibilities
* Collaborative research
* Data management

Modules addressing research misconduct, intellectual property, research involving human participants, and research involving animals eventually will be developed.

According to the Web site, the modules will help research administrators gain

1. An understanding of ethical issues covered in the modules
2. Improved skills and knowledge on how to work with researchers
3. Improved knowledge on how to identify conflicts of interest and how to handle allegations of conflicts of interest
4. Improved knowledge in the administration of funding and other financial responsibilities
5. Improved knowledge of the responsibilities of research mentors and trainees
6. Improved skills in administration of collaborative research between organizations and researchers
7. Improved knowledge of the responsibilities of researchers to collect, store, manage, report, and share data

The “Administrators and the Responsible Conduct of Research” tutorial was prepared for ORI by Stephen Erickson, Ph.D., Director, Office for Research Compliance, Boston College and Karen M.T. Muskavitch, Ph.D., Program Coordinator Responsible Conduct of Research, Boston College. To access the material, visit http://ori.hhs.gov/education/products/rcradmin/index.html.
Other Help From ORI. The RCR Educational Resources webpage contains a variety of materials for RCR education. ORI notes that some resources, those not produced with support from ORI or other federal agencies, may require permission or purchase. Federal-supported resources are free to use. Topics covered include the following: General, Animals, Collaboration, Conflicts, Data, Humans, Mentorship, Misconduct, peer Review, and Authorship. For the latest information on the availability of these and other resources, visit www.ori.hhs.gov/education.

Online Database of RCR Educational Materials

Elizabeth Heitman, Vanderbilt University and Debie Schilling, University of California, Davis

Clinical research educators have a new resource for curricular materials on research integrity made possible by the Clinical and Translational Science Award (CTSA) Consortium’s Clinical Research Ethics Key Function Committee (CRE KFC).

The CRE KFC Educational Materials Group, together with the creators of CTSpedia at the University of California, San Francisco, has produced a searchable online inventory of syllabuses, PowerPoint slides, videos, lecture notes, handouts, and links for use in education and training in the responsible conduct of research (RCR). These resources are intended to assist with the development of instructional programs in RCR within the CTSA Consortium as well as in other related contexts within the United States and abroad.

Materials, posted at www.ctspedia.org/do/view/ResearchEthics/WebHome, are indexed by topic, format, and originating institution. CTSpedia was created as a central repository for tools, educational materials, bits of wisdom, and other resources that may be useful to students and investigators in clinical and translational research. All materials are freely accessible and, unless otherwise stated, may be copied, adapted, and redistributed for non-profit educational purposes, provided that appropriate credit is given to the original authors and affiliate institutions, which hold copyright.

The available RCR materials were collected as part of a larger inventory of CTSA-related RCR education activities, conducted by the CRE KFC Educational Materials Group. A full report of the inventory project was published earlier this year in Clinical and Translational Science (DuBois JM, Schilling D, Heitman E, Steneck NH, Kon AA. Instruction in the responsible conduct of research: An inventory of programs and materials within CTSAs. Clinical and Translational Science 2010; 3(3): 109-111. PMID: 20590680).

This project was funded through a CTSA Administrative Supplement grant from the National Center for Research Resources (3UL1 RR024146-03S2. PI: Lars Berglund, University of California, Davis). The project workgroup included: Debie Schilling, University of California, Davis; James DuBois, Washington University/Saint Louis University; Nicholas Steneck, University of Michigan, Ann Arbor; Elizabeth Heitman, Vanderbilt University; Jon Merz, University of Pennsylvania; David Bui, University of California, San Francisco; Nancy Hills, University of California, San Francisco; Mary Banach, University of California, San Francisco; and Alexander Kon, University of California, Davis.

ORI has also recently made available a “video simulation on research integrity.” According to ORI, the “interactive movie” contains a scenario where “research misconduct causes a noted lab to lose funding, creates bad publicity to the university, and eventually causes the withdrawal of a multi-million dollar endowment. ... [V]iewers have the opportunity to undo the damage by assuming the roles of a graduate student, post doc, principal investigator, and a research integrity officer and make decisions to prevent misconduct from occurring unnoticed.” There is also a facilitator’s guide. The video and guide are accessible at http://ori.hhs.gov/TheLab.


**NIH's Policy ‘Ensures’ Public Trust**

“I believe only when the highest standards of research integrity are upheld do we maintain the public’s trust in the research we conduct, support and administer,” wrote Sally Rockey, the director of NIH’s Office of Extramural Research (OER), in a recent issue of OER’s newsletter, *Extramural Nexus*.

OER has developed a web page that explains research integrity and the processes that ensue from allegations of inappropriate conduct in research (http://grants.nih.gov/grants/research_integrity). The site provides information on the definition of research misconduct, what is expected and/or required of investigators and trainees, and what happens when NIH learns of an allegation of research misconduct.

NIH requires every NIH-supported trainee to receive instruction in the responsible conduct of research. The responsible conduct of research plan for every training and career development grant application is assessed as part of the peer review of the application. There is not a defined curriculum or format, but each plan must address five components: format, subject matter, faculty participation, duration of instruction, and frequency of instruction.

Every institution that receives funding from the NIH, as a PHS agency, must have written policies and procedures in place for handling allegations of misconduct. This assurance is on file with the HHS Office of Research Integrity (www.ori.hhs.gov), under which all NIH-supported research falls for investigation of allegations of research misconduct.

**NSF Requires RCR Training for Students**

Section 7009 of the America COMPETES Act of 2007 (Pub.L. No. 110-69) requires that the National Science Foundation director mandate “that each institution that applies for financial assistance from the foundation for science and engineering describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.”

Because the definition of “supported by” became an issue for many in the re-
search community, NSF clarified in a frequently asked questions document that “students (undergraduates and graduates) and postdoctoral researchers who receive NSF funds (support from salary and/or stipends to conduct research on NSF grants) will obtain RCR training.” This FAQ (#3) and others are available at the NSF’s RCR Web site, www.nsf.gov/bfa/dias/policy/rcr.jsp. In devising its policy on RCR training, NSF gave institutions flexibility and did not mandate specifics for what constituted a training program but instead left the details up to the institution.

**International Subs Covered.** How the training requirement applies to international subrecipients is another source of confusion for grantees. NSF has a dedicated international research integrity Web page, which should provide assistance. The site is www.nsf.gov/od/oise/intl-research-integrity.jsp. NSF has indicated that it will continue to focus on RCR training as applied internationally as it develops additional RCR resources.

**More Resources Coming.** To further assist institutions with compliance, NSF decided to make a serious investment in Web-based tools and “support a multidisciplinary team” to create a resource center. In August 2010, NSF awarded a $5 million, five-year grant to the University of Illinois at Urbana-Champaign, which is partnering with the National Academy of Engineering, Howard University, and Public Responsibility in Medicine and Research, to create an online ethics center. The site will offer training resources that are specific to different scientific disciplines.

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**Figure 1530.2-1: Elements of the Process**

The following are suggested elements of a research misconduct process:

- Know your policy; use your policy
- Exercise independence; make referrals as appropriate
- Secure evidence
- Maintain records
- Ensure confidentiality
- Consider potential conflict of Interest
- Have separate stages to an investigation
- Be sure all practices are fair, timely, fact- and document-based, objective and impartial
- Explain the elements of a research misconduct finding
- Consider standard practices of the research community
- Know when and how misconduct should be reported to a federal funding agency

*Source: Adapted from a presentation by Peggy Fischer, NSF OIG, January 18, 2008, www.nsf.gov/oig/BMCCResearchIntegrityandPlagiarism.ppt*
Preparing for a Select Agent Inspection

The Office of Inspector General (OIG) within the Department of Health and Human Services (HHS) is planning to look at how well HHS agencies oversee compliance with select agent regulations, according to the OIG’s FY 2008 work plan. The 2008 plan indicates a focus on select agents is planned for the Centers for Disease Control and Prevention (CDC), National Institutes of Health, and the Food and Drug Administration. OIG plans to review how well agencies comply with regulations internally, but in the case of CDC, an added focus is being put on reviewing how well the agency is enforcing the regulations among entities it oversees. (The OIG work plan, issued annually, lays out the projects OIG plans to undertake, either initiate or continue, in the new federal fiscal year (which begins each Oct. 1.).)

In its work plan, OIG mentions that it “continues to receive requests for information and investigations of alleged terrorist and bioterrorist activities relating to select agents.” And there has been recent congressional interest in the topic as well. In light of the OIG’s current focus on select agents compliance, now might be a good time to review your compliance and be prepared in case of an inspection.

Overview

The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 and the Agricultural Protection Act of 2002 require entities to register with the U.S. Department of Health and Human Services (HHS) or Agriculture (USDA) if they possess, use, or transfer biological agents or toxins (i.e., select agents and toxins) that could pose a severe threat to public health and safety; to animal or plant health; or animal or plant products.

Select agents or toxins are agents that the HHS considers to have “the potential to pose a severe threat to human health.” A list of these agents are found in the select agent regulation (42 CFR 73). HHS, with authority delegated to the CDC, regulates the possession, use, and transfer of select agents that could pose a severe threat to public health and safety. The CDC Select Agent Program Website is www.cdc.gov/od/sap.

The USDA, with authority delegated to the Animal and Plant Health Inspection Service (APHIS), has similar authority as the CDC to regulate select agents that pose a severe threat to animal and plant health and/or animal and plant products. The agents and toxins regulated by APHIS are found in 7 CFR Part 331 (Plants) and 9 CFR Part 121 (Animals). The APHIS Select Agent Program Website is www.aphis.usda.gov/programs/ag_selectagent.

Agents that pose a severe threat to animal health, animal products, and also public health are referred to as “overlap agents.” These agents appear on both the HHS and USDA list of agents and toxins. A listing of these agents/toxins can be found on the select agents and toxins page (http://www.selectagents.gov/agentToxinList.htm). In the regulations, the two agencies — CDC and APHIS — attempt to standardize the regulations.
In addition to ensuring that laboratories safely handle these select agents and toxins, the acts also require increased safeguards and security measures for these agents, including controlling access, screening entities and personnel (i.e., security risk assessments), and establishing a comprehensive and detailed national database of registered entities. The acts also impose criminal and civil penalties for the inappropriate use of select agents and toxins (see Figure 1530.3-1).

**Preparing for an Inspection**

Organizations that register to handle select agents are subject to inspection by CDC or APHIS. Inspections are conducted to verify the information that institutions provide to the government in registering to work with select agents, to ensure compliance with safety and security requirements of the rule, and to review records that must be maintained for compliance with the rule.

Prior to inspection, institutions should perform self-assessments to assure compliance. The following steps are recommended:

◆ Review the select agent rule requirements to be sure you understand what’s necessary.

◆ Review applicable biosafety requirements and guidelines to ensure you understand what they’re specific recommendations and requirements entail.

◆ Review your institution’s application to the Select Agent Program to ensure it is current, accurate, and complete.

◆ Conduct an internal audit to ensure compliance with the rule.

◆ Review all records, and safety and security plans.

◆ Contact the Select Agent Program with questions.

CDC uses specific checklists to guide its inspections, available at the National Select Agent Registry Web site (www.selectagents.gov). These checklists have been developed from the select agent regulations and nationally recognized safety standards. The information entered on the checklists is derived from inspectors’ observations of the physical safety and security components of the facility, an examination of the documentation available, and from interviews with laboratory personnel.
Also available at the National Select Agent Registry Web site are inspection videos that describe how to prepare for an inspection and what transpires during and after an inspection.

Guidance is posted at the National Select Agent Registry Web site to assist entities in complying with the security requirements of the select agent regulations. Note that the security plan mandated by the select agent rule must address inventory control procedures; minimum education and experience for individuals with access to select agents; provisions for routine maintenance; security training for personnel; provisions for securing the area where select agents are present; procedures for dealing with lost or stolen keys, passwords, etc.; provisions for inspecting packages upon entry and exit; and protocol for transferring select agents.

**Figure 1530.3-1: Settlements Involving Allegations of Noncompliance**

A review of recent settlement agreements posted by the Department of Health and Human Services (HHS), Office of Inspector General (OIG) involving select agents and universities and research institutes uncovered the following. (Note: In each civil monetary penalty (CMP) case resolved through a settlement agreement, the settling party has contested the OIG’s allegations and denied any liability. No CMP judgment or finding of liability has been made against the settling party.)

◆ **September 2007.** The Regents of the University of California, Lawrence Livermore National Laboratory (LLNL), California, agreed to resolve its liability for an alleged violation of the Select Agent Program. The OIG alleged that LLNL transferred vials of anthrax to two laboratories located in Florida and Virginia. During the transfers, anthrax was released from the shipped vials. An investigation of the packaging for the shipments revealed several violations of regulations governing the shipment of anthrax. The OIG specifically alleged that LLNL violated the transfer requirements of the select agent regulations by failing to comply with the applicable shipping and packaging laws when transferring a select agent. In addition, the OIG also alleged that LLNL failed to comply with security and access requirements by allowing an individual not authorized to have access to select agents to package the shipments of anthrax, and that LLNL’s Responsible Official failed to ensure compliance with the shipping and packaging requirements of the select agent regulations. Under the terms of the settlement, LLNL agreed to pay the OIG $450,000 to resolve these allegations.

**CDC Select Agent Activity**

Since the publication of the select agent interim final rule in 2003 (followed by the final rule in 2005, CDC in collaboration with federal partners has (as of September 2007): (1) conducted 607 inspections to ensure that appropriation security and safety measures are in place to deter the theft, loss, or release of select agents; (2) authorized 2,199 requests to transfer select agents; and (3) granted access approvals to 14,868 individuals to work with select agents, following a security risk assessment.

**Source:** Richard E. Besser, MD, Centers for Disease Control and Prevention, Department of Health and Human Services, “Oversight of Select Agents by the Centers for Disease Control and Prevention,” Congressional Testimony, Oct. 4, 2007.
Figure 1530.3-1 (continued)

◆ **October 2006.** The University of South Carolina agreed to pay $50,000 to resolve its liability for an alleged violation of the Select Agent Program. The OIG alleged that USC violated the program in the following ways: (1) failure of Responsible Official to apply for an amendment to USC’s Certificate of Registration; (2) inadequate security plan; (3) inadequate biosafety plan; (4) inadequate incident response plan; (5) failure to maintain adequate training records; and (6) failure to maintain adequate inspection and inventory records.

◆ **November 2005.** Southern Research Institute (SRI), Maryland, agreed to pay $150,000 to resolve its liability for an alleged violation of the Select Agent Program. The OIG alleged that SRI made an unauthorized transfer of Bacillus anthracis (anthrax) to an unregistered entity. The unregistered entity, a research facility, had requested that SRI send it nonviable anthrax cells. The preparations that SRI sent, however, contained viable anthrax spores.

◆ **September 2005.** National Jewish Medical and Research Center (NJC), Colorado, agreed to pay $20,000 to resolve its liability for an alleged violation of the Select Agent Program. The OIG alleged that NJC made an unauthorized transfer of Staphylococcal enterotoxins to Toxin Technology, Inc., without first obtaining authorization from the Centers for Disease Control and Prevention.

1530.4  **Complying with New Chemical Security Rule: First Request Extension**  
AIS editors

The first thing institutions might want to consider is filing for an extension for more time to comply with Appendix A of the Department of Homeland Security's Chemical Facility Anti-Terrorism Standards. Compliance is required within 60 days of its publication in the Nov. 20 Federal Register (72 Fed. Reg. 65396). The standards themselves went into effect June 8, 2007. The standards and appendix require that universities and others conduct an inventory of a host of chemicals and report those that exceed certain levels to DHS, which then would decide what actions an institution must take to secure them (see www.dhs.gov/xprevprot/programs(gc_1169501486179.shtm.)

Universities that must comply with the Department of Homeland Security’s Chemical Facility Anti-Terrorism Standards can apply for an extension using a form posted on the Web site operated by the Council on Governmental Relations (http://206.151.87.67/docs/DHSCFATSeXtTemplate.doc). The Campus Safety, Health and Environmental Management Association also has published a template (available at www.cschema.org/about/documents/dhs_top_screen_extension_letter.doc) as well as an FAQ (at www.cschema.org/about/documents/dhs_cfats_topscreen_faq.pdf).

An extension request, DHS said, should be signed by the “president, dean, provost, or other senior official at a college or university” and submitted to the Assistant Secretary for Infrastructure Protection.

Once the institution has addressed the extension issue, it should move quickly to conduct an actual inventory so it knows what must be reported. According to the final appendix, if quantities of the chemicals listed in the appendix exceed the allowable thresholds, they must be reported to DHS, using an assessment tool called a “Top Screen.” The final rule gave organizations some flexibility in how they report their chemical holdings, stating that, “if appropriate,” an organization could submit a Top-Screen on a building-by-building basis or a campus-wide basis. Keep in mind that DHS will look at an organization’s Top Screen filing and determine whether it is high risk and if a security plan is required.

The DHS Chemical Security Assessment Tool (CSAT) includes four Web-based tools: a Facility Registration Questionnaire, the consequence screening questionnaire (or Top-Screen), the Security Vulnerability Assessment (SVA) tool, and the Site Security Plan (SSP) tool. CSAT is available on the DHS Web site at www.dhs.gov/xprevprot/programs(gc_1169501486197.shtm).
Creating a Research Integrity Policy

AIS editors

In March 2009, President Obama issued an executive memorandum on scientific integrity. In follow-up, Office of Science and Technology Policy Director John Holdren issued a December 17, 2010, memorandum that set forth minimum scientific integrity standards and directed federal agencies and departments to develop and implement policies. OSTP has established a Web site that offers resources and tracks the initiative’s ongoing progress (www.whitehouse.gov/administration/eop/ostp/library/scientificintegrity).

At least one new policy, from the U.S. Department of the Interior, is posted at the OSTP Web site. Several components of the policy have been adapted and are included here (Figures 1530.5-1 thru 1530.5-4) as research administrators may wish to use them to develop new or review existing policies. (DOI’s entire policy is posted at www.whitehouse.gov/sites/default/files/microsites/ostp/DOI-DM-sci-integ.pdf.)
Figure 1530.5-1: Elements of a Scientific and Scholarly Integrity Policy

Policy Goals
- Decisions are based on science and scholarship and are respected as credible.
- Science is conducted with integrity and excellence.
- There is an enduring culture of scientific and scholarly integrity.
- Scientists and scholars are widely recognized for excellence.
- Faculty/staff/employees are proud to uphold the high standards and lead by example.

Purpose
Scientific and scholarly information considered in decision making must be robust, of the highest quality, and the result of as rigorous scientific and scholarly processes as can be achieved. Most importantly, it must be trustworthy.

Scope
Applies to all faculty/staff/employees, as well as students, contractors, _________.

Principles
1. Define expectations of behavior for all
2. Encourage the free-flow of information
3. Establish transparency expectations
4. Make scientific credentials part of hiring criteria
5. Encourage scientists to communicate openly
6. Reinforce principles of whistleblower protection
7. Ensure training makes expectations clear to all
8. Encourage scientists to engage with communities of practice
9. Examine issues and correct any problems that arise
10. Establish best practices throughout the organization

Definitions and Responsibilities
- Explanations of terms
- Sets expectations for all levels of leadership

Reporting and Resolving Allegations
- Allegations must be submitted in writing
- Allegations may be submitted by internal or external entities
- ________ office will track status of allegations
- Fact finding regarding the allegation will be conducted by the appropriate person
- Appropriate others will be involved depending upon whom the alleged perpetrator is (faculty, contractor, etc.)
Figure 1530.5-1: Elements of a Scientific and Scholarly Integrity Policy, continued

**Applicability**

The policy applies to faculty/staff/employees who engage in scientific and scholarly activities, defined as individuals who conduct or directly supervise scientific and scholarly activities including, but not limited to, proposing, performing, or reviewing inventory, monitoring, research, and assessment or in reporting results thereof. The policy also applies to individuals who directly supervise or personally perform work involving the compilation and translation of scientific and scholarly data or information into formats used by the institution’s decision makers and other nonscientists.

**Scientific and Scholarly Misconduct**

- Fabrication, falsification, or plagiarism in proposing, performing, or reviewing scientific and scholarly activities, or in the products, reporting, or application of results
- Intentionally circumventing policy that ensures integrity of science and scholarship
- Actions that compromise scientific and scholarly integrity—does not include honest error or differences of opinion

**Finding of Scientific and Scholarly Misconduct**

A finding of scientific and scholarly misconduct requires the following:

- A significant departure from accepted practices of the relevant scientific and scholarly community has occurred
- The misconduct be committed intentionally, knowingly, and recklessly
- The allegation be proven by a preponderance of evidence

**Employee Responsibilities**

- Be aware of and upholding the principles in the Code of Scientific and Scholarly Conduct
- Comply with the policy and any guidance
- Reporting knowledge of scientific misconduct
- Ensure that any outside person covered by this policy with whom they are executing contracts, written agreements, grants, etc. are aware of their responsibilities
- Uphold responsibilities and conduct outlined in the Code of Scientific and Scholarly Conduct
- Adhere to ten “I will” statements
- Adhere to six additional “I will” statements that apply to scientists and scholars
- Adhere to three “I will” statements that apply to decision makers in addition to the ten that apply to all faculty/staff/employees subject to this policy

**Reporting and Resolving Allegations of Loss of Integrity**

- Allegations must be submitted in writing within 60 days of discovery of alleged misconduct
- Allegations may be submitted by internal or external individuals or entities
- Cases of waste, fraud, and abuse should be reported to ________
- ________ will review the allegations
- ________ may convene a review panel to conduct fact finding
- Corrective action may be taken in consultation with human resources and the appropriate manager/supervisor

Source: Adapted from a presentation by A. Thornhill, Department of the Interior, www.whitehouse.gov/sites/default/files/microsites/ostp/A.Thornhill%20presentation.pdf
Figure 1530.5-2: Sample Code of Scientific and Scholarly Conduct

A. All ________ employees and _________ [any others] will abide by the following code of scientific and scholarly conduct to the best of their ability:

(1) I will act in the interest of the advancement of science and scholarship for sound decision making, by using the most appropriate, best available, high quality scientific and scholarly data and information to support the mission of ____________.

(2) I will communicate the results of scientific and scholarly activities clearly, honestly, objectively, thoroughly, accurately, and in a timely manner.

(3) I will be responsible for the resources entrusted to me, including equipment, funds, my time, and the employees I supervise.

(4) I will adhere to the laws and policies related to protection of natural and cultural resources and to research animals and human subjects while conducting science and scholarship activities.

(5) I will not engage in activities that put others or myself in an actual or apparent conflict of interest.

(6) I will not intentionally hinder the scientific and scholarly activities of others or engage in scientific and scholarly misconduct.

(7) I will clearly differentiate among facts, personal opinions, assumptions, hypotheses, and professional judgment in reporting the results of scientific and scholarly activities and characterizing associated uncertainties in using those results for decision making, and in representing those results to other scientists, decision makers, and the public.

(8) I will protect, to the fullest extent allowed by law, the confidential and proprietary information provided by individuals, communities, and entities whose interests and resources are studied or affected by scientific and scholarly activities.

(9) I will be responsible for the quality of the data I use or create and the integrity of the conclusions, interpretations, and applications I make. I will adhere to appropriate quality assurance and quality control standards, and not withhold information that might not support the conclusions, interpretations, and applications I make.

(10) I will be diligent in creating, using, preserving, documenting, and maintaining scientific and scholarly collections, records, methodologies, information, and data in accordance with all policy and procedures.

B. In addition, for scientists and scholars:

(1) I will place quality and objectivity of scientific and scholarly activities and reporting of results ahead of personal gain or allegiance to individuals or organizations.

(2) I will maintain scientific and scholarly integrity and will not engage in fabrication, falsification, or plagiarism in proposing, performing, reviewing, or reporting scientific and scholarly activities and their products.

(3) I will fully disclose methodologies used, all relevant data, and the procedures for identifying and excluding faulty data.

(4) I will adhere to appropriate professional standards for authoring and responsibly publishing the results of scientific and scholarly activities and will respect the intellectual property rights of others.

(5) I will welcome constructive criticism of my scientific and scholarly activities and will be responsive to their peer review.
Figure 1530.5-2: Sample Code of Scientific and Scholarly Conduct, continued

(6) I will provide constructive, objective, and professionally valid peer review of the work of others, free of any personal or professional jealousy, competition, non-scientific disagreement, or conflict of interest. I will substantiate comments that I make with the same care with which I report my own work.

C. In addition, for decision makers:

(1) I will do my best to support the scientific and scholarly activities of others and will not engage in dishonesty, fraud, misrepresentation, coercive manipulation, censorship, or other misconduct that alters the content, veracity, or meaning or that may affect the planning, conduct, reporting, or application of scientific and scholarly activities.

(2) I will offer respectful, constructive, and objective review of my employees’ scientific and scholarly activities and will encourage their obtaining appropriate peer reviews of their work. I will respect the intellectual property rights of others and will substantiate comments that I make about their work with the same care with which I carry out and report the results of my own activities.

(3) I will adhere to appropriate standards for reporting, documenting, and applying results of scientific and scholarly activities used in decision making and ensure public access to those results in accordance with policy and established laws.

Figure 1530.5-3: Sample Notification of Allegation of Scientific Misconduct

TO:
FROM:
CC:
SUBJECT: Allegation of Scientific Misconduct

An allegation of scientific misconduct has been filed with the ____________ regarding the following: [Insert as specific and detailed a description of the allegation as possible here, but do not disclose the name of the person who filed the allegation.] This allegation has not yet been investigated or determined to have merit. However, pursuant to the ____________’s scientific integrity policy, I will be conducting an inquiry to determine its merits. Under the procedures, you must preserve and provide to my office all original research records and materials relevant to the above allegation. An interview will be scheduled with you to discuss the allegation and will be part of the official record. You may also provide for the record a written response to the allegation. Once an inquiry into this matter is concluded, I will inform you in writing that:

(1) a review of this matter has dismissed the allegation and the matter is closed;
(2) a review of this matter has verified that scientific misconduct has taken place and you will be contacted about possible additional action; or
(3) the allegation has been referred to ____________ for further fact-finding. You will be notified of your rights concerning the review, your obligations during the investigation, and your opportunity to respond to the allegation.
Figure 1530.5-4: Sample Closure Memorandum

TO:
FROM:
SUBJECT: Resolution of Allegation of Scientific Misconduct

I am pleased to inform you that, after an inquiry into the allegation of scientific misconduct that was filed against you, I have found no merit in the charge.

[Insert as specific and detailed a description of the allegation as possible but do not disclose the name of the person who filed the allegation.] As a result, the concerns of this allegation are considered closed. I appreciate your cooperation in this important process.
Financial Conflict of Interest and NSF

The national Science Foundation’s (NSF) conflict of interest policy requires grantees that employ more than 50 people to maintain a policy under which institutions must manage, reduce, or eliminate all conflicts prior to the expenditure of award funds. Institutions are only required to notify NSF in cases when a conflict cannot be managed satisfactorily.

In a recent review of NSF grantee conflicts of interest, the NSF Office of Inspector General looked at individual policies and procedures at nine grantee institutions. In conducting its review, OIG identified 17 policy and procedural standards in the NSF policy (see www.nsf.gov/oig/11-2-009-COI.pdf). The following were identified by the NSF OIG as those that institutions “must include in their conflicts of interest policies” (#1-13) and those they “must follow when implementing their conflicts program” (#14-17).

<table>
<thead>
<tr>
<th>Standard</th>
<th>Cite*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The policy is written.</td>
<td>AAG Ch. IV, sec., A.1</td>
</tr>
<tr>
<td>2. The policy is enforced.</td>
<td>AAG Ch. IV, sec., A.2</td>
</tr>
<tr>
<td>3. The policy should require that each investigator discloses to a responsible representative of the institution all significant financial interests (SFIs) of the investigator (i) that would reasonably appear to be affected by the research or educational activities funded or proposed for funding; or (ii) in entities whose financial interest would reasonably appear to be affected by such activities.</td>
<td></td>
</tr>
<tr>
<td>4. The policy should require that each investigator disclose to a responsible representative of the institution all SFIs of the investigator's spouse (i) that would reasonably appear to be affected by the research or educational activities funded or proposed for funding; or (ii) in entities whose financial interest would reasonably appear to be affected by such activities.</td>
<td></td>
</tr>
<tr>
<td>5. The policy should require that each investigator disclose to a responsible representative of the institution all SFIs of the investigator's dependent children (i) that would reasonably appear to be affected by the research or educational activities funded or proposed for funding; or (ii) in entities whose financial interest would reasonably appear to be affected by such activities.</td>
<td></td>
</tr>
<tr>
<td>6. The policy must ensure that the investigator has provided all required financial disclosures at the time of proposal submission.</td>
<td>AAG Ch. IV, sec., A.3</td>
</tr>
<tr>
<td>7. The policy must require that financial disclosures are updated during the period of the award, either annually, or as new reportable SFIs are obtained.</td>
<td>AAG Ch. IV, sec., A.4</td>
</tr>
<tr>
<td>8. The policy must designate one or more persons to review financial disclosures.</td>
<td>AAG Ch. IV, sec., A.5</td>
</tr>
<tr>
<td>9. The policy must designate one or more persons to determine whether a COI exists.</td>
<td>AAG Ch. IV, sec., A.6</td>
</tr>
<tr>
<td>10. The policy must designate one or more persons to determine what conditions or restrictions, if any, should be imposed to manage, reduce, or eliminate such COI.</td>
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<td>11. The policy includes adequate enforcement mechanisms.</td>
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<td>12. The policy provides for sanctions where appropriate.</td>
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<tr>
<td>Standard</td>
<td>Cite*</td>
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<tr>
<td>13. The policy includes arrangements to keep NSF’s Office of General Counsel appropriately informed if the institution finds it is unable to satisfactorily manage a COI</td>
<td>AAG Ch. IV, sec., A.6</td>
</tr>
</tbody>
</table>
| 14. All COIs for each award are managed, reduced or eliminated prior to the expenditure of the award funds. | AAG Ch. IV, sec. A.1.  
(In effect after 1/4/10)                                               |
| 15. The institution must take reasonable steps to ensure that its subawardees, contractors, or collaborators have their own policies in place that meet NSF’s COI policy standards or that investigators working at these entities follow the policies of the primary institution. |                                                                      |
| 16. Grantee notifications of COIs that cannot be managed, reduced, or eliminated must be submitted via NSF FastLane. | GPM Ch. V, sec. 510f, footnote 11; AAG Ch. IV, sec. A.6, footnote.   |
| 17. The institution maintains records of all financial disclosures and of all actions taken to resolve COIs for at least 3 years beyond date of grant termination/completion, or until the resolution of any action involving records, whichever is longer. | GPM Ch. V, sec. 510g;  
AAG Ch. IV, sec. A.7                                               |

1530.7 NSF Public Access Policy Frequently Asked Questions
National Science Foundation

General

1. What is NSF’s public access policy?
NSF requires that either the version of record or the final accepted manuscript in peer-reviewed scholarly journals and papers in juried conference proceedings or transactions (also known as “juried conference papers”) be deposited in a public access compliant repository designated by NSF; be available for download, reading and analysis free of charge no later than 12 months after initial publication; possess a minimum set of machine-readable metadata elements in a metadata record to be made available free of charge upon initial publication; be managed to ensure long-term preservation; and be reported in annual and final reports during the period of the award with a persistent identifier that provides links to the full text of the publication as well as other metadata elements. For more information, see section 3.1 of “Today’s Data, Tomorrow’s Discoveries: Increasing Access to the Results of Research Funded by the National Science Foundation,” at http://www.nsf.gov/pubs/2015/nsf15052/nsf15052.pdf.

2. Why does NSF have a public access policy?
On February 22, 2013, the White House Office of Science and Technology Policy (OSTP) released a memorandum entitled “Increasing Access to the Results of Federally Funded Research.” It directed Federal agencies with more than $100 million in research and development (R&D) expenditures to develop plans to make the published results of federally funded research freely available to the public within one year of publication, and it required researchers to better account for and manage the digital data resulting from federally funded scientific research. NSF’s response, Today’s Data, Tomorrow’s Discoveries, is posted at: http://www.nsf.gov/pubs/2015/nsf15052/nsf15052.pdf. The response builds upon NSF’s long history of encouraging data sharing. The Foundation requires that each proposal submitted to NSF include a data management plan, as set forth in the Grant Proposal Guide (GPG) Chapter II.C.2.j. The data management plan describes how the proposal will conform to NSF policy on the dissemination and sharing of research results (see the Award & Administration Guide (AAG) Chapter VI.D.4 for additional information).

3. How does NSF’s public access policy work?
The Foundation’s approach to implementing public access goals is based, to the greatest extent possible, on existing policies and procedures.

Data. Existing NSF policies on preparing data management plans will be retained. In 2011, the Foundation updated implementation of its data sharing policy by requiring proposers to include a two-page supplementary document to their proposals in which they describe a data management plan (DMP) for data created under an award that result from the proposal. More information on preparing DMPs is
available in the GPG Chapter II.C.2.j and at: http://www.nsf.gov/bfa/dias/policy/dmp.jsp. If an award is made, the investigator must manage data described in the DMP in accordance with the plan and should report these data-related activities in annual and final project reports. Investigators are expected to share with other researchers, at no more than incremental cost and within a reasonable amount of time, the primary data created or gathered in the course of their work under an NSF grant. Grantees are expected to encourage and facilitate such sharing.

Publications. Peer-reviewed journal articles and juried conference papers, based wholly or partially on NSF support, must be deposited in the designated NSF repository. Either the final accepted version of the manuscript or the version of record may be submitted. NSF expects to make the repository service available in the fall of 2015 for voluntary compliance. In accordance with the applicable award terms and conditions, NSF “expects significant findings from research and education activities it supports to be promptly submitted for publication, with authorship that accurately reflects the contributions of those involved” (Grant General Conditions (GC-1) Article 45). NSF also requires grantees to acknowledge NSF support, assure that any publication of NSF-funded material contains the appropriate disclaimer, and provide the cognizant NSF program officer with a copy of the publication, together with the award number and other appropriate identifying information, promptly after publication (GC-1 Article 27). The public access policy concerning publications, including juried conference papers, will go into effect for articles resulting from awards made for proposals submitted, or due, on or after January 25, 2016. NSF’s Public Access requirements will be imposed via the addition of a new award term and condition that will be applied to awards resulting from proposals submitted, or due, on or after January 25, 2016.

4. Who must comply with NSF’s public access policy?
Awards to institutions will include conditions to implement NSF Public Access requirements. Principal Investigators must ensure that all researchers who work on projects funded in whole or in part by NSF grants or cooperative agreements comply with the public access policy.

5. Does the public access policy apply to NSF staff?
NSF employees who generate published journal articles and juried conference papers in the course of official business must comply with NSF’s public access policy.

6. Who is responsible for meeting the public access requirement (e.g., submitting material to a designated repository; managing the data in accordance with the DMP)?
Principal Investigators are responsible for meeting the public access requirements.

7. What material is covered by NSF’s public access policy?
NSF’s public access policy covers articles in peer-reviewed journals, juried conference papers, and data that result from NSF funding. These research outputs are a subset of the outcomes that should be reported in annual and final project reports.
NSF’s public access policy for data is covered by NSF’s data management plan requirements.

Principal Investigators are already required to include a two-page data management plan (DMP) as a supplementary document in their proposals (see GPG II.C.2.j), and the DMP is evaluated during the merit review process. The scope of the material covered by the DMP (for example, whether it includes software) is governed by guidance at the directorate, division, and program levels. PIs are encouraged to consult with the cognizant program officers.

8. When does the policy go into effect?
The public access requirement will apply to new awards resulting from proposals submitted, or due, on or after January 25, 2016, which will be the effective date of the updated Proposal & Award Policies & Procedures Guide (PAPPG). For further information, see the GPG, Chapter II.C.2.j and http://www.nsf.gov/bfa/dias/policy/dmp.jsp.

9. What repository does NSF require PIs to use for depositing publications?
NSF requires principal investigators who publish peer-reviewed journal articles or juried conference papers to deposit a copy of the item (either the final accepted version or the version of record, as defined in NSF’s public access plan) in the NSF public access repository hosted by the Department of Energy (DOE). The NSF public access repository is expected to be available for voluntary compliance by the end of the 2015 calendar year.

10. What is a “final accepted version” of a manuscript?
The final accepted version is the author’s final manuscript of a peer-reviewed paper accepted for journal publication, including all modifications resulting from the peer-review process. It is the version before the journal makes edits that will constitute the final “version of record.”

11. What is a “version of record”?
The version of record is the publisher’s authoritative copy of the paper, including all modifications from the publishing peer-review process, copyediting, stylistic edits, and formatting changes.

12. What are “page charges”?
A “page charge” may be imposed by the publisher to help cover the costs of publication. These also may be known as publication and printing costs. See the Grant Proposal Guide II.C.2.g.(vi) b., Publication/Documentation/Dissemination for additional information.

13. What is an Article Processing Charge (APC)?
As defined by Wikipedia and based on research by David Solomon and Bo-Christer Björk, “An article processing charge (APC), also known as a publication fee, is a fee
which is sometimes charged to authors in order to publish an article in an open access academic journal”

(http://en.wikipedia.org/wiki/Article_processing_charge). These also may be known as “publication costs”. See the Grant Proposal Guide II.C.2.g.(vi) b., Publication/Documentation/Dissemination for additional information.

14. Does NSF require PIs to deposit their publications in a “trusted repository”?

As stated above, NSF requires principal investigators who publish peer-reviewed journal articles or juried conference papers to deposit a copy of the items (either the final accepted version or the version of record, as defined in NSF’s public access plan) in the NSF public access repository hosted by the Department of Energy (DOE). The NSF public access repository is expected to be available for voluntary compliance by the end of the 2015 calendar year. At this time, NSF has not formally adopted ISO 16363, a recommended practice for assessing the trustworthiness of digital repositories. As outlined in NSF’s public access plan (section 7.7), “DOE stores and preserves the information in a dark archive in a climate-controlled, appropriate environment in Oak Ridge, Tenn., with redundant, backup systems in geographically distinct locations. DOE accommodates both the widely used non-proprietary PDF and PDF/A formats and can convert material in PDF to PDF/A, should the need arise.”

15. Does the NSF public access policy cover data as well as publications?

Yes. All proposals submitted to NSF must include a supplementary document of no more than two pages labeled “Data Management Plan.” (DMP). For further information, see the GPG Chapter II.C.2.j and http://www.nsf.gov/bfa/dias/policy/dmp.jsp.

16. What repository does NSF require PIs to use for depositing data?

Data management requirements and plans specific to the Directorate, Office, Division, Program, or other NSF unit, relevant to a proposal are available at: http://www.nsf.gov/bfa/dias/policy/dmp.jsp. If guidance specific to the program is not available, then the requirements established in the GPG, Chapter II.C.2.j apply.

17. Are repositories going to be linked? If multiple repositories are acceptable for a particular discipline, how do PIs know which one to use?

NSF requires principal investigators to deposit a copy of their peer-reviewed journal publications or juried conference papers in the public access repository hosted by the Department of Energy, which will become available by the end of calendar 2015. Deposit of data and software should be addressed in the data management plan (DMP), which is a required element of every proposal and is evaluated as part of the merit review process. NSF encourages investigators to seek guidance from the cognizant program officer on selection of an appropriate repository.

18. Does NSF require PIs to deposit software, code, etc.?

The scope of material covered by the DMP (for example, whether it includes soft-
ware or code) is governed by guidance at the directorate, division, and program levels. Investigators are encouraged to consult with the cognizant program officer.

19. How does NSF handle situations in which the journal that has accepted a paper requires the PI to submit the data on which the paper is based in a specified repository? Does NSF require the PI to deposit the data in another repository, as well?

Data resulting from the award should be managed according to the data management plan that accompanied the proposal. If the repository identified by the journal is different from the one in the DMP or if the principal investigator is only depositing a subset of the data collected by the award, then the PI should consult the cognizant program officer about appropriate deposit.

20. Does NSF allow for an embargo or delay for access to journal publications? And if so, how long is it?

NSF allows an embargo or administrative delay for access of up to 12 months from the date of publication for journal articles or juried conference papers. Individual journal titles (or proceedings or transactions) may institute shorter periods. If a publisher’s embargo exceeds 12 months, NSF will make available the version deposited in the NSF public access repository.

21. How can the public search material resulting from NSF’s awards?

NSF offers several ways to search for publications resulting from NSF awards. Through Research.gov and the NSF website, the public can search active and expired awards by keywords. The results of those queries provide a list of relevant awards, abstracts and other information about the awards, and publications that have been reported. Search capability will also be provided in the NSF public access repository hosted by the Department of Energy (DOE). Finally, commercial search services, such as Google and Bing, also provide access to NSF-funded research. More information and guidance on searching for publications resulting from NSF awards is provided at: https://www.research.gov/research-portal/appmanager/base/desktop?_nfpb=true&_eventName=viewQuickSearchFormEvent_so_rsr.

22. Why does NSF use the term “public access” (instead of “open access”)?

NSF is following the practice established by the National Institutes of Health (NIH) in using the term “public access” to characterize the policy that implements the objectives of the OSTP memorandum of February 22, 2013.

From the Investigator’s Perspective

23. Do NSF’s public access requirements apply to me?

It depends. Are you a principal investigator of research that is funded, wholly or in part, by NSF? Is it a new award that resulted from a proposal that was submitted or due on or after January 25, 2016? If your answer to both questions is “Yes,” the public access requirements apply to you.
24. I am working on an article supported by an award that was made prior to January 25, 2016. Is this work subject to the public access requirements?

No, material resulting from awards made prior to the January 2016 effective date is not subject to public access requirements for publications. However, the data resulting from your award should be managed according to the data management plan included in your proposal.

25. May I submit an article to NSF’s designated public access repository on a voluntary basis?

Yes. NSF encourages principal investigators to make their peer-reviewed journal publications and juried conference papers available to the public through the public access repository.

26. What repository must I use for depositing publications?

NSF requires principal investigators who publish peer-reviewed journal articles or juried conference papers to deposit a copy of the item (either the final accepted version or the version of record, as defined in NSF’s public access plan) in the NSF public access repository hosted by the Department of Energy (DOE). It is expected to be available for voluntary compliance by the end of the 2015 calendar year.

27. Do I have to deposit an article into NSF’s designated public access repository in order to report it in my annual or final project report?

Yes. You must deposit a copy of any peer-reviewed journal publication (either the final accepted version or the version of record) or any juried conference paper in NSF’s designated public access repository for articles (eligible publications or conference papers) resulting from an award made for a proposal submitted, or due, on or after January 25, 2016 in order to report that publication or conference paper in your annual or final project report. We are developing a streamlined process to support the entry of publications and related metadata in annual and final project reports.

28. I am publishing an article in an Open Access journal; do I still have to deposit a copy of the article in a designated repository?

Yes. You must deposit a copy of any peer-reviewed journal publication (either the final accepted version or the version of record) or any juried conference paper in NSF’s designated public access repository for articles (eligible publications or conference papers) resulting from an award made for a proposal submitted, or due, on or after January 25, 2016, even if the article was published in an Open Access journal, in order to report that publication or conference paper in your annual or final project report.

29. I am publishing an article in an Open Access Journal that is a member of the publisher coalition CHORUS. Do I still have to deposit a copy of the article in a designated repository?

Yes. You must deposit a copy of any peer-reviewed journal publication (either the final accepted version or the version of record) or any juried conference paper in NSF’s designated public access repository for articles (eligible publications or conference papers) resulting from an award made for a proposal submitted, or due, on or after January 25, 2016, even if the article was published in an Open Access journal, in order to report that publication or conference paper in your annual or final project report.
conference papers) resulting from an award made for a proposal submitted, or due, on or after January 25, 2016, even if the article was published in an Open Access journal that is a member of CHORUS, in order to report that publication or conference paper in your annual or final project report. CHORUS: Clearinghouse for the Open Research of the United States is a coalition of publishers that provides a set of services to increase access to the publicly funded journal literature.

30. I am publishing an article in a journal that does not have a public or open access policy. Am I still required to comply with the public access deposit requirement?
Yes. You must deposit a copy of any peer-reviewed journal publication (either the final accepted version or the version of record) or any juried conference paper in NSF’s designated public access repository for articles (eligible publications or conference papers) resulting from an award made for a proposal submitted, or due, on or after January 25, 2016 in order to report that publication or conference paper in your annual or final project report.

31. My university maintains an institutional repository. If I deposit a copy of my article there, do I still have to deposit a copy in the NSF-designated repository?
You may deposit a copy of your juried article in your institution’s repository. But depositing a copy of your article in the institutional repository does not satisfy NSF’s deposit requirement. You must also submit a copy (either the final accepted version or the version of record) to NSF’s public access repository.

32. If I deposit a copy of my article in my university’s institutional repository, do I still have to deposit a copy of the article in a repository designated by NSF?
Yes.

33. I am required to deposit a copy of my article in my university’s institutional repository. Do I still have to deposit a copy in a repository designated by NSF?
Yes.

34. May I post a copy of my article to my personal webpage?
NSF’s public access policy permits you to post to your personal webpage a copy of the article version that has been deposited in the public access repository. You should consult your journal publisher to determine what restrictions may be imposed on the publisher’s version of record.

35. If I post a copy of my article to my personal webpage, am I still required to deposit a copy in a repository designated by NSF?
Yes.

36. Who owns the copyright to my journal articles arising from NSF grants?
Unless otherwise provided in the award, grantees own or may permit others to own copyright, subject to the Federal Government’s license.
37. What is the Federal Government’s license?
The Federal Government has a non-exclusive, irrevocable, worldwide, royalty-free license to exercise or authorize others to exercise all rights under copyright to use a federally-funded work for Federal purposes. The Federal Government license includes the right to have the copyrighted material included in a repository where the public can search, read, download, and analyze the material in digital form.

38. Am I required to use a license to allow others to use my journal article?
You should consult with your publisher or the repository in which the article is housed to ascertain conditions that may be imposed on future uses of the article. The Federal Government has a non-exclusive, irrevocable, worldwide, royalty-free license to exercise or authorize others to exercise all rights under copyright to use a federally-funded work for Federal purposes. The Federal Government license includes the right to have the copyrighted material included in a repository where the public can search, read, download, and analyze the material in digital form.

39. My article has been submitted but is not yet accepted. How do I report this article in my annual or final project report?
If the article does not result from an award made for a proposal submitted, or due, on or after January 25, 2016, refer to current Research Performance Progress Report (RPPR) requirements for reporting instructions.

40. My article has been accepted but is not yet published. How do I report this article in my annual or final project report?
If the article does not result from an award made for a proposal submitted, or due, on or after January 25, 2016, refer to current Research Performance Progress Report (RPPR) requirements for reporting instructions.

41. I have deposited a copy of my article in one of the disciplinary repositories (e.g., SSRN, arXiv, etc.). How do I report this paper in my annual or final project report?
Juried articles deposited in one of the disciplinary repositories must also be submitted to NSF’s public access repository. These should be reported in annual and final reports during the period of performance with a unique persistent identifier that provides links to the full text of the publication as well as other metadata elements.

42. Do I have to deposit the data that support findings in my article in a public access repository?
Mandatory deposit of data on which an article is based may be required by the journal publisher or other funders. Data collected as part of NSF-funded research, whether or not they are used to support a given publication, should be managed according to the data management plan.

43. I am not the lead author on an article that has been partially supported by research funding provided by NSF. Does NSF still require a copy of the article to be deposited in the
NSF-designated repository?
Yes. The principal investigator of the award is responsible for ensuring deposit in the NSF-designated repository of all articles based on research funded under that award.

44. More than one Federal funding agency, in addition to NSF, has supported the research on which an article is based. Where do we deposit a copy of the article? Do we need to deposit a copy at every agency that has supported the research?
Deposit of a copy, either the final accepted version or the version of record, in the designated NSF repository is required if NSF has supported part of the research. You should consult the policies of the other funders to determine if deposit in another repository is also required.

45. Funding for the research supporting an article is provided by several sources, including NSF and private philanthropies. Do I need to deposit a copy at every organization that has supported the research?
Deposit of a copy, either the final accepted version or the version of record, in the designated NSF repository is required if NSF has supported part of the research. You should consult the policies of the other funders to determine if deposit in another repository is also required.

46. May I use funds from my NSF award to pay for article processing charges, publication or page charges, or charges for preparing data for deposit?
You may request funds to cover costs of publication, page charges, or preparation of data as a direct cost in your budget proposal, which is evaluated as part of the merit review process. See the Grant Proposal Guide II.C.2.g.(vi) b., Publication/Documentation/Dissemination for additional information.
Disclosure, Evaluation and Management of Financial Conflict of Interest in Research

Winona Ward and Carolyn Strong, University of Central Florida

Abstract

The most difficult aspect of financial conflict of interest (FCOI) and compliance with federal regulations involves the assessment and management of identified FCOIs. While some federal agencies provide examples of the structure and content of management plans, it is up to institutions to evaluate FCOI to determine whether and how research may be conducted when conflict is present. Unfortunately, there is minimal federal guidance on the evaluation and management aspect of FCOI and institutions must carefully consider and implement appropriate procedures to ensure compliance. Once a conflict has been disclosed and is known by the institution, the burden of responsibility falls squarely on the institution. Without clear direction from federal agencies, institutions may become paralyzed with indecision or refuse to allow any research to proceed where there is known conflict. Sources exist which provide some guidance on how to mitigate conflicts of interest. This paper provides information and steps to assist institutions with the evaluation and management of FCOI.

Introduction

Objectivity is essential in scientific research in order to maintain public trust and protect the health and safety of research participants, as well as those relying on the integrity of the research results. While it is understood that university researchers may engage in the pursuit of outside economic interests, due consideration must be given to determining whether such interests could bias, or have the appearance of biasing, the design, conduct, or reporting of research. In addition, certain organizational interests constitute a financial conflict of interest (FCOI) and must also be scrutinized. While federal agencies including the National Institutes of Health (NIH) and the National Science Foundation (NSF) have implemented specific policies regarding the disclosure of FCOI, what remains vague is how institutions should evaluate and manage FCOI.

Federal Regulations

Federal FCOI regulations are aimed at ensuring that the design, conduct, or reporting of research funded under the Public Health Service (PHS), NSF and other applicable agency-funded grants and cooperative agreements will not be biased by any conflicting financial interest of investigators responsible for the research. Current FCOI regulations include 42 CFR Part 50 Subpart F (grants and cooperative agreements), 45 CFR Part 94 (contracts) effective October 1, 1995, Final Rule on Financial Conflict of Interest Regulations (Federal Register, 2011), and National Science Foundation Award and Administration Guide, chapter IV. A. These FCOI regulations establish standards for the identification and mitigation of potential, actual, and apparent FCOI.

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Disclosure

When a researcher has an outside economic interest that could affect the (apparent or real) conduct of a research project, FCOI may threaten the objectivity and integrity of research. In order to ensure that FCOIs are identified and appropriately addressed, the National Institutes of Health (NIH) and NSF have specific policies for the disclosure, management, and reporting of FCOI. A summary of these policies is as follows:

NIH

An investigator is responsible for complying with their institution’s FCOI policies and procedures, completing training on FCOI, and disclosing required significant financial interest (SFI) information to their institution whether the investigator is planning to participate in or is participating in PHS or other applicable agency-funded research.

Investigator

Investigator refers to “the project director or principal investigator and any other person, regardless of title or position who is responsible for the design, conduct, or reporting of research funded by the PHS (e.g., NIH), or proposed for such funding, which may include, for example, collaborators or consultants” (NIH, 2014).

A Financial Conflict of Interest (FCOI) exists when an institution “reasonably determines that an Investigator’s Significant Financial Interest is related to a NIH-funded research project and could directly and significantly affect the design, conduct or reporting of the NIH-funded research” (NIH, 2014). A Significant Financial Conflict of Interest “is defined by the regulation as anything of monetary value, including but not limited to salary or other payments for services (e.g., consulting fees or honoraria); equity interests (e.g., stocks, stock options, or other ownership interests); and intellectual property rights (e.g., patents, copyrights, and royalties from such rights)” (NIH, n.d.). A reportable Significant Financial Interest (SFI) is one that an investigator has that could directly and significantly affect the design, conduct, or reporting of NIH-funded research. The determination regarding whether or not there is a Significant Financial Interest is made by the institution’s designated official(s).

The investigator must disclose SFIs, including those for their spouse and dependent children (1) at the time of application for research funding; (2) within thirty days of discovering or acquiring a new SFI; and (3) at least annually, in accordance with the specific time period prescribed by the institution, during the period of award.

Institutions are responsible for maintaining an up-to-date, written, enforced FCOI policy that complies with federal regulations and making the policy publicly accessible. If no publicly accessible website is available to display the Institution’s FCOI policy, access to the written policy must be provided upon request within five business days. Additional institutional responsibilities include, but are not limited to:

1. Soliciting and reviewing disclosures of investigators’ SFIs that are reasonably related to an investigator’s institutional responsibilities via a designated institutional official;
2. Determining whether an investigator’s SFI is related to the funded research and, if so related, whether the SFI is a FCOI (SFI that could directly and significantly affect the design, conduct, or reporting of the funded research);

3. Developing and implementing management plans, as needed, to manage FCOIs for awardee investigators and subrecipient investigators, if applicable;

4. Submitting initial and annual FCOI reports to the sponsor in accordance with the regulation;

5. Completing retrospective reviews when there is noncompliance with the institution’s policy or the FCOI regulation and updating any previously submitted FCOI report, if required after the retrospective review is complete;

6. Submitting mitigation reports when bias is found in funded research as a result of the finding from a retrospective review; and

7. Adequate record-keeping of disclosure, encompassing the institution’s response to and all actions taken regarding such disclosures. Records must be maintained for at least three years from submission date or as specified in 45 C.F.R. 74.53(b) and 92.42 (b).

**NSF**

Investigators must disclose all SFIs (including those of the investigator’s spouse and dependent children) (1) that would reasonably appear to be affected by the research or educational activities funded or proposed for funding by NSF; or (2) in entities whose financial interests would reasonably appear to be affected by such activities.

SFI means anything of monetary value, including, but not limited to, salary or other payments for services (e.g., consulting fees or honoraria); equity interest (e.g., stocks, stock options or other ownership interests); and intellectual property rights (e.g., patents, copyrights and royalties from such rights).

Institutions employing more than 50 persons must maintain an appropriate written and enforced policy on conflict of interest. NSF refers institutions to university associations and scientific societies for guidance in the development of FCOI policies. At a minimum, an institutional policy must ensure that investigators have provided all required financial disclosures at the time a proposal is submitted to NSF, and during the period of the NSF award, either on an annual basis or as new reportable SFIs are obtained. Additional NSF policy requirements include:

1. Designation of one or more persons to review SFI disclosures, determine whether a conflict of interest exists, and determine what conditions or restrictions, if any, should be imposed by the institution to manage, reduce, or eliminate such conflict of interest.

2. Adequate enforcement mechanisms, and provision for sanctions where appropriate.

3. Arrangements for keeping NSF’s Office of the General Counsel appropriately informed if the institution finds that it is unable to satisfactorily manage a conflict of interest.
4. Maintenance of records of all financial disclosures and of all actions taken to resolve conflicts of interest for at least three years beyond the termination or completion of the grant to which they relate, or until the resolution of any NSF action involving those records, whichever is longer.

**Exclusions**

The applicability of financial conflict of interest disclosures varies between PHS and NSF. NSF exempts organizations with fewer than 50 employees from the FCOI requirements. However, with PHS there are no exemptions from the requirements.

The term “significant financial conflict of interest” (SFI) excludes the following specific types of interests:

1. Salary, royalties, or remuneration from the employing institution
2. Income from seminars, lectures, or teaching engagements sponsored by public or nonprofit entities
3. Income from service on advisory committees or review panels for public or nonprofit entities
4. An equity interest that when aggregated for the investigator and the investigator’s spouse and dependent children, meets both of the following tests: (1) does not exceed $10,000 in value (NSF) or $5,000 (PHS) as determined through reference to public prices or other reasonable measures of fair market value, and (2) does not represent more than a 5% ownership interest in any single entity
5. Salary, royalties, or other payments that, when aggregated for the investigator and the investigator’s spouse and dependent children, are not expected to exceed $10,000 (NSF) or $5,000 (PHS) during the next 12-month period.

**Evaluation and Management**

As described above, both NIH and NSF have detailed, written policies regarding FCOI requirements, including a requirement for institutions to evaluate and manage FCOI. Institutions have implemented certain policies and procedures to comply with the regulations, but many institutional policies focus primarily on what constitutes FCOI, and whether and how to disclose FCOI. And while institutional policies may include procedures for the evaluation of FCOI, what is unclear is how to evaluate and mitigate risk factors related to known conflicts of interest. This uncertainty can lead to institutional paralysis or a complete refusal by institutions to allow research to proceed under any circumstance when there is FCOI.

On the other hand, lack of proper institutional controls and disregard for identified conflicts can lead to research misconduct. Unmitigated conflict can also lead to injury or harm to research study participants and can damage the entire research enterprise by reducing public trust in research (Columbia University, n.d.).

The Bayh-Dole Act of 1980 was established to allow universities to retain ownership rights to intellectual property developed from federally funded research. It also allowed universities to share royalties with faculty inventors. This gave institutions...
and researchers a financial stake in the outcome of research, and created an inherent conflict particularly with respect to industry-sponsored clinical research (Beinkowski & Goldfarb, 2011).

A case at Duke University in 2010 involving Dr. Anil Potti provides a prime example of both individual and institutional conflict of interest, and the risks when successful research leads to potential commercialization and financial gain. In this case, Dr. Anil Potti was a research scientist who claimed to have found the “holy grail of cancer” (CBS News, 2012). Dr. Potti claimed to have “discovered how to match a patient’s tumor to the best chemotherapy drug” (CBS News, 2012). Dr. Potti and his colleague, Dr. Joseph Nevins, showed tremendous advances with their research, including research that resulted in patent applications and a startup company to market their technology. A team of biostatisticians from MD Anderson Cancer Center, Drs. Keith Baggerly and Kevin Combes, attempted to reproduce the work in order to use the new technique. Serious flaws in the research were noted and although Dr. Potti and Dr. Nevins made attempts to publicly correct errors, many more were identified. Concerns were expressed to the administrators at Duke University. Research was temporarily halted for an external review, yet no problems were found in the review and the research was allowed to resume.

Upon Dr. Potti’s resignation from Duke in 2010, allegations from scientists elsewhere were being made, claiming that Dr. Potti had “stolen their data for inclusion in his paper in the New England Journal” (The Economist, 2011). Further investigation into the matter began and Duke made national headlines with this scientific misconduct investigation. The university found “lapses and errors including being slow to deal with potential financial conflicts of interests” (The Economist, 2011) that were declared by the investigators. While the research misconduct became the focal point in this case, the layers of FCOI involved cannot be ignored.

An earlier case in 1999 involving a gene therapy trial at the University of Pennsylvania resulted in the death of 18-year-old Jesse Gelsinger (Wilson, 2010). The Gelsinger case brought to light not only the importance of the proper vetting of FCOI, but also the need for post-approval monitoring. In this case, the principal investigator, Dr. James Wilson, and Penn both had an interest in the biotech startup company funding the study, Genovo. In addition, Genovo agreed to give Penn $21 million to fund research at Penn in exchange for a license to existing technology, and first right to license new technology resulting from such research (Wilson, 2010). While Penn had obtained outside counsel to develop and approve a management plan for the trial in light of the investigator and Penn’s conflicts of interest, what occurred during the conduct of the trial is what led to the death of Jesse. Namely, the protocol consent was modified by Wilson and co-investigators after approval by the IRB, and information about the death of animals and potential for toxicity and death were removed. In addition, Wilson continued to be directly involved in the conduct of the study despite Penn’s requirement that such participation be “avoided” (Wilson, 2010). Proper oversight, independent monitoring and random study audits could have saved Jesse.

As demonstrated by the Potti and Gelsinger case, proper controls are needed
when FCOI is present, and most importantly when research involves human subjects. The Association of American Medical Colleges (AAMC) - Association of American Universities (AAU) Advisory Committee Report on Financial Conflicts of Interest in Human Subjects Research (2008) includes a template for analyzing conflicts of interest in research involving human subjects. The steps for evaluation and management of conflicts included in the AAMC report can be applied to FCOI in non-human research, as well. Once a conflict of interest has been disclosed, the first step in assessment is a risk benefit analysis to determine if the conflict of interest can be managed, reduced or eliminated (AAMC, 2008). Figure 1530.8-1 illustrates considerations for a risk-benefit analysis.

The next step in FCOI evaluation is determining whether the conflict can be managed, reduced or eliminated. If a conflict cannot be eliminated, and the benefits outweigh the risks, a management plan must be created. According to the NSF policy, examples of conditions or restrictions that might be imposed to manage, reduce, or eliminate conflicts of interest include, but are not limited to:

1. public disclosure of significant financial interests;
2. monitoring of research by independent reviewers;

![Figure 1530.8-1. FCOI Risk-Benefit Analysis](image-url)
3. modification of the research plan;
4. disqualification from participation in the portion of the NSF-funded research that would be affected by significant financial interests;
5. divestiture of significant financial interests; or
6. severance of relationships that create conflicts.

According to NIH, conditions or restrictions that might be imposed to manage a financial conflict of interest include, but are not limited to:
1. Public disclosure of financial conflicts of interest (e.g., when presenting or publishing the research);
2. For research projects involving human subjects research, disclosure of financial conflicts of interest directly to participants;
3. Appointment of an independent monitor capable of taking measures to protect the design, conduct, and reporting of the research against bias resulting from the financial conflict of interest;
4. Modification of the research plan;
5. Change of personnel or personnel responsibilities, or disqualification of personnel from participation in all or a portion of the research;
6. Reduction or elimination of the financial interest (e.g., sale of equity interest); or
7. Severance of relationships that create financial conflicts.

The NSF and NIH guidance can be used by institutions in the creation of appropriate FCOI management plans.

As discussed in the book, *Rescuing science from politics* (Wagner & Steinzor, 2006), certain fundamental principles should be followed to protect research integrity, including independence, or the ability to conduct research without restriction, including sponsor influence and transparency via honest communication of data and research results to the research community and public. What is also discussed and perhaps most critical is the preservation of “disinterestedness” in the conduct of science. That is, science must be pursued objectively without external influence and for the pure benefit of scientific discovery. In the Duke situation, the FCOI created with the establishment of a company and a clear opportunity for financial gain, disinterestedness is lost and risks are great. Similar conflict is created when private companies (e.g., pharmaceutical companies) sponsor research or enter into consultancy agreements with faculty for assistance with writing protocols, FDA submissions, journal articles, etc.

Figure 1530.8-2 includes components necessary for proper evaluation and management of financial conflict of interest. In cases where human subject research is proposed and an individual conflict of interest has been identified, the AAMC report (2008) indicated that there should be a presumption that the individual should not be allowed to conduct human subject research. This presumption is rebuttable, but there must be a thorough review and determination by institutional representatives, and such review must include compelling circumstances for participation by the conflicted individual. The Gelsinger case demonstrates the importance of
further institutional vigilance in the form of independent monitoring and oversight, even after appropriate approvals are given.

**Compliance**

Federal regulations require that institutions establish adequate enforcement mechanisms, provide for employee sanctions, and take other administrative action, where appropriate. Institutions may determine the nature of the enforcement mechanisms and sanctions.

**NIH**

After determination has been made of an existing FCOI, the institution has 60 days to report the FCOI. If disclosure of a FCOI is not made in a timely manner by the investigator, the Institutional Official has 60 days to review the identified SFI and make a determination as to whether the FCOI exists and if it is related to the NIH-funded research. The institution must then implement a management plan and report these actions to NIH.

If an investigator fails to comply with an institution’s FCOI policy or a FCOI management plan, the institution must complete a retrospective review within 120 days of determining noncompliance. This review will include evaluation of the
investigator’s activities and the NIH-funded research, documentation of the institution’s methodology of reviewing the SFI, and determination of whether the design, conduct, or reporting of research was biased.

If bias is found, the institution must submit a mitigation report to the NIH, in accordance with 42 CFR 50.605(b)(3). Depending on the nature of the FCOI, an institution may determine that additional interim measures are necessary with regard to the investigator’s participation in the research until such time that the institution completes the retrospective review in accordance with 42 CFR 50.605(a)(3) and 42 CFR 50.605(b)(3).

As part of the management plan, the institution is responsible for annually updating the agency with the status of the FCOI, along with any changes made to the management plan. Descriptions of the following elements must be provided in the management plan:

1. Role of investigator identified as having a FCOI and the duties in the research project;
2. Stipulations of the management plan;
3. Design of the management plan and the safeguards that will be in place for the research project;
4. Confirmation from the investigator indicating agreement with the management plan;
5. Steps the institution will take in order to monitor the management plan to ensure compliance by the investigator; and
6. Additional information as needed (Arango et al., 2014).

NIH will review FCOI information and take appropriate action, or require the institution to take further action. NIH may advise the institution on how to promote and maintain appropriate objectivity in the NIH-funded research project. NIH may further require institutions employing such an investigator to enforce corrective actions prior to receipt of an NIH award involving the investigator.

Institutions are responsible for maintaining an up-to-date, written, enforced FCOI policy that complies with federal regulations and making the policy publicly accessible.

NSF
The NSF FCOI policy did not adopt the same changes as NIH that became effective August 24, 2012. Instead, NSF relies on the Office of the General Counsel (OGC) to follow up with the institution once an unmanageable conflict of interest is reported. Institutions are responsible for notifying the NSF OGC when an identified FCOI for an NSF-funded project cannot be managed. Notification of any conflict of interest that cannot be managed, reduced, or eliminated, and notifications when research will proceed without conditions or restrictions when a COI exists must be submitted to NSF via the Fastlane System (NSF AAG, 2014). Upon receipt of notification from an institution, the OGC will evaluate the case as follows:
1. Examine a copy of the institution’s conflict of interest policy to determine if it includes procedures for addressing unmanageable conflicts.

2. Contact the authorized institutional representative to determine what actions the institution plans/has taken with respect to unmanageable conflict of interest.

3. Request confirmation from the institution when such actions have been completed.

Conclusion
While federal agencies including the NIH and NSF have implemented specific policies regarding the disclosure of FCOI, what remains vague is how institutions should evaluate and manage FCOI. Federal regulations related to FCOI have been established to manage the conflict created in situations such as the Potti and Gelsinger cases, and to ensure proper controls for the preservation of scientific integrity and, most importantly, protection of human subjects.

Institutional policies have been written and implemented to ensure compliance with federal regulations, but the burden of disclosure and management falls squarely on the scientist and the institution. Proper procedures, internal controls, an FCOI management committee including unbiased members, an empowered IRB, and a culture of transparency and compliance are critical to successful management of FCOI. When there is complete refusal by institutions to allow research to proceed in the presence of FCOI, or when questionable research sits idle on the desk of paralyzed institutional officials who are just not sure how to proceed, everyone loses. Institutions must look directly into the face of conflict, utilize available tools, and take appropriate steps to evaluate and mitigate risks associated with individual and institutional FCOI. Institutions and investigators must ensure that the safety of human subjects is paramount, and that FCOI management plans are detailed and enforced, including proper post-approval monitoring. Admittedly, in some cases, FCOI may not be manageable by an institution and other options must be explored. But we hope this paper will help mobilize officials into making informed decisions so that research may continue for the public good.

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**About the Authors**

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Monitoring Financial Conflict of Interest

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Abstract
Conflict of interest is heavily intertwined with research. The purpose of this study was to examine the literature and regulations in order to describe efforts required to properly monitor and disclose conflict of interest as researchers become steadily involved in innovation and discovery. The public assumes that when a conflict is disclosed, it means negative or unlawful behavior, but conflict of interest is not always bad. The primary effort should be expended on acknowledging conflicts and being transparent about whatever the conflict entails. To handle conflict of interest in an upfront manner, it is necessary for institutions to maintain strict policies, review conflicts on at least an annual basis, and have guidelines in place to manage the conflict and follow up with ongoing monitoring of the conflicts.

Introduction
“Conflict of interest means that because of activities or relationships with other persons or organizations, a person is unable or potentially unable to render impartial assistance or advice to the Government, that the person’s objectivity in performing the contract is or might be otherwise impaired, or that the person has or might acquire an unfair competitive advantage” (U.S. Food and Drug Administration, 2014, para. 1). This paper primarily focuses on financial conflict of interest, but the terms financial and conflict of interest are used interchangeably. The majority of conflicts of interest reported are associated with financial issues.

This article will discuss how Financial Conflict of Interest (FCOI) is viewed by academia and research institutions and their efforts to remain in compliance. In the 1980s several prime examples of bad decisions within the research community helped raise the public’s awareness of how conflict of interest may impact research integrity. Early in the 1990s guidelines were introduced to handle conflicts of interest although the academic medical institutions were reluctant to get on board (Korn, 2000). In 1995 federal regulations required institutions conducting research to develop conflict of interest policy (42 CFR Part 50); whereas FDA 21 CFR Part 54 required sponsors to ensure compliance of investigators. On August 24, 2011, 42 CFR Part 50 was revised and published with institutional implementation required by August 24, 2012.

Background
The updated regulation promotes objectivity in research by establishing principles that provide a reasonable expectation that the design, conduct, and reporting of research will be free from bias resulting from financial conflicts of interest (42 CRF Part 50, 2011). Two new stipulations came from this revised regulation—investigator training in COI was required and COI information had to be accessible to the

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public (42 CRF Part 50, 2011). With this in mind it was hoped that end results could improve research integrity, transparency, human subject protection, and the public’s perception (U.S. Food and Drug Administration, 2015).

Editors of scientific journals have grave concern over conflict of interest. The World Association of Medical Editors (WAME) has called upon all journals to take this issue seriously and to manage conflict of interest to preserve the trust held by its readers (Ruff, 2015). In 2013 WAME, Committee on Publication Ethics (COPE), the Directory of Open Access Journals, and the Open Access Scholarly Publishers Association released a publication entitled *The principles of transparency and best practice in scholarly publishing* (Ruff, 2015). The general opinion is that some journals have policies in place to adhere to these principles, but it does not appear that many enforce them. Ruff provided several examples of conflict of interest that were brought to the attention of various publishers. Most of these publishers stated that they follow the COPE guidelines, yet no action was taken to update their policies with regard to conflict of interest.

It is clear that the scientific community remains unclear on how to control accountability and transparency within scientific writings. Ruff provided some call for action steps from the ethical scientific community to help eliminate corruption within research and to promote accountability and regain “public trust and scientific integrity” (Ruff, 2015, conclusion, para. 1). Examples include: having a proven ethical scientist to create a Center for Monitoring and Implementing Publication Ethics to oversee reports of unethical behavior; having a Center that can enforce sanctions and report their findings; and having several oversight organizations provide a small percent of funds to the Center that could be charged to the organization’s members which would also send a message that they are serious about transparency (Ruff, 2015).

There are many reasons financial conflict of interest occurs in the research world. It can be for job advancement, monetary rewards, genuine interest in taking a product to market, accepting gifts from sponsors, or publishing notoriety, among many others. Not all instances of financial conflict of interest are ill-intended, but all still need to be disclosed. Being transparent about financial conflicts of interest takes the assumptions out of the equation when the public or scientific community is making a decision about a discovery, drug, or device, or simply reading an article. The public needs to have complete trust and be able to make an informed opinion with all facts presented to them. Disclosing conflicts is mandated; however, it should not stop at that point. Once a conflict has been disclosed, it is imperative for the institution to create a management plan based on their current policies and to monitor this conflict throughout its lifespan.

**Monitoring**

Financial conflict of interest can be difficult to track and monitor as it is dependent on the honor system, which trusts investigators and academia to report their financial holdings honestly. Some instances of financial conflict of interest are not disclosed because the investigator did not consider it to be a financial conflict of
interest or overlooked the potential conflict altogether. Financial conflict of interest is not necessarily unlawful, but can be unlawful if it is used as an unethical means to someone’s financial advantage (Hutchens, 2012). In fact, it is acceptable to have a conflict as long as the COI is disclosed, managed, and subsequently monitored. Hutchens (2012) stated that regardless of how robust your training program is, it will not be successful unless you have a strong way to “identify, manage, audit and document the COI compliance workflow” (p. 48).

Technology has increased the ability to monitor but there must be ample training to correspond with this technology to aid in identifying and creating a system-wide process (Hutchens, 2012). All staff should be informed of the management plan in place and know what types of monitoring will take place once a COI has been identified. Technology also allows for easier tracking mechanisms to provide oversight when suspicion arises. When institutions transfer the financial conflict of interest from paper to technology, there needs to be a gatekeeper which monitors the information regularly, and standard operating procedures (SOPs) in place for this monitoring process. The SOPs should also clearly delineate what actions are to be taken should non-compliance occur.

Monitoring financial conflict of interest takes planning and resources to provide consistent oversight and compliance. Institutions should have sound policies in place in accordance with regulations for all researchers and research staff so that financial conflicts of interest “do not adversely affect the protection of participants, the integrity of the research, or the credibility of the Human Research Protection Program” (Association for the Accreditation of Human Research Protection Programs [AAHRPP], 2014 para. 1). Researchers and research staff are defined by AAHRPP as “anyone responsible for the design, conduct, or reporting of research” (2014, para. 1). AAHRPP provides tips for establishing effective policies that will ensure all areas of financial conflict of interest are covered effectively and to which regulation is being referenced. The U.S. Food and Drug Administration, U.S. Department of Health and Human Services, and National Science Foundation have regulations for financial conflict of interest, but it is important to reference which set of regulations have been identified by the institution as applicable to its staff.

The following is a summary of the tips provided (AAHRPP, 2014, recommended comment section):

1. Cite or identify the laws or regulations related to financial conflict of interest that your organization must follow.
2. Define the individuals who are covered by the financial conflict of interest policy.
3. Define the financial interests that must be disclosed.
4. Provide education to staff and investigators.
5. Describe the process for disclosing financial interests.
6. Describe the time frame for reporting changes in financial interests related to approved research.
7. Describe the process used to evaluate and, when necessary, to manage finan-
cial conflicts of interest.

8. Describe the process used to monitor and enforce management plans and provide employee sanctions or other administrative actions to ensure research compliance.

9. Describe the role of the IRB.

10. Describe how reporting requirements are completed.

11. Maintain good record keeping.

Disclosures

There are advantages and disadvantages to disclosing conflicts of interest. By disclosing conflicts, it is often assumed that the intended audience will understand that the transparency provided is enough for them to know the conflict at hand has not affected the outcome. However, it can have the opposite effect. Loewenstein, Cain, and Sah (2011) stated that “two major psychological mechanisms” can influence the recipients of the disclosure. These two psychological mechanisms are strategic exaggeration and moral licensing.

Strategic exaggeration is when the disclosure is artificially inflated for fear the normal disclosure would be taken too lightly (Loewenstein et al., 2011). Strategic exaggeration is indicated when a physician has made a conflict of interest disclosure, but is compelled to overstate the benefits of the research results, such as a new drug. How a disclosure is presented can influence the interpretation by the public. If the conflict of interest is presented with facts and comes across as an honest testimonial, it is perceived as trust in the person or institution disclosing (Loewenstein et al., 2011).

Moral licensing refers to a lack of professional behavior as a result of making a disclosure (Loewenstein et al., 2011). Moral licensing can be described as allowing yourself to act dishonest or immoral when you have previously been known as honest and moral. A researcher may perceive that disclosing a conflict provides the rationale for or justifies biased outcomes or results.

These two psychological mechanisms can potentially cause confusion when a conflict of interest is disclosed due to exaggeration or minimization of the conflict or lack of moral behavior during the implementation of the research. The intended audience may not receive a perfectly clear picture of the extent of the reported conflict or measures taken to monitor the conflict of interest.

Revisions to UCF’s Conflict of Interest Disclosure System

The University of Central Florida (UCF) took a proactive approach to conflict of interest (COI) and Conflict of Commitment (COC) prior to the final regulations by implementing an electronic system capturing all disclosures by their researchers. That system is the Academic Research and Grants Information System (ARGIS®) (Adkins, McClellan, & Miner, 2013). Once the PHS 2011 regulations were finalized, UCF realized the need to make further commitments to enhancing its conflict of interest disclosure system.

Revised steps were implemented by UCF to ensure conflicts were captured and
monitored. First, UCF created a Potential Conflict of Interest & Conflict of Commit-
ment Research Policy. This policy was revised to include whom and when someone
must disclose. UCF also used a checklist provided by the National Institutes of
Health to ensure the revised Public Health Service regulations would be followed.
In addition to the standard proposed financial earnings to be reported, UCF added
another layer by expanding its policy requiring researchers to report all extramural
travel costs paid on their behalf. UCF took dramatic steps to ensure all staff were
aware of this policy, such as distributing an announcement from the Vice President
for Research Office to all Deans and creating a new web page, among other avenues
of communication (Adkins et al., 2013).

Second, UCF created a conflict of interest and conflict of commitment policy
guideline. This guideline is an all-inclusive guideline to aid investigators in iden-
tifying what is to be reported. Per this policy, COI is to be reported prior to any
awards, or within 30 days of newly discovered COI. This guideline includes sub-
recipients to either produce certification that a COI is in place or adhere to UCF’s
policies. Should an investigator be found non-compliant, all activities will be con-
sidered suspended until a proper COI is in place. If necessary, disciplinary actions
can be taken (Adkins et al., 2013).

Third, UCF implemented financial conflict of interest training. This training is
required prior to conducting any research and must be repeated every four years.
UCF has mandated that all researchers, including students, utilize the CITI training
prior to any funded research. The two modules required through CITI are Financial
Conflict of Interest: Overview, Investigator Responsibilities and COI Rules and Institution-
al Responsibilities as They Affect Investigators. A UCF workshop that addresses COI,
integrity, and ethical decisions was also created for graduate students and required
for doctoral candidates involved with funded research (Adkins et al., 2013).

Fourth, UCF established a conflict of interest committee. This committee and
a Compliance Officer review significant financial interest as reported to determine
whether a monitoring plan is needed (Adkins et al., 2013).

Fifth and finally, UCF created a modified electronic proposal submission form
that includes potential conflict disclosure questions (Adkins et al., 2013). When
using these electronic forms, the investigator will trigger a task to name the project
team. The project team will in turn receive notice to complete a FCOI form in AR-
GIS®. UCF felt that being prepared and disclosing all conflicts was better than tak-
ing the risk of losing reputation or federal grant funding (Adkins et al., 2013).

UCF remains proactive in the collection of disclosures from all staff and students
affiliated with research projects. The website provides all regulations and forms
required along with ample guidance of what is needed. When a conflict is disclosed,
a monitoring plan is put into place and approved by authorized reviewers and the
Chair of the UCF Board of Trustees (University of Central Florida, 2015).

The UCF IRB does not allow research to continue if a significant financial con-

flict exists unless the conflict of interest committee “(a) determines that an indi-

vidual’s participation is essential for the conduct of the research and (b) establishes
an effective mechanism for managing the conflict and protecting the integrity of the

research” (University of Central Florida, 2016).

**Conclusion**

Conflict of interest is a serious matter that needs to be handled proactively. Each university and institution needs to have sound policies with adequate training on a continual basis. These policies should be reviewed and updated regularly. When a conflict of interest happens, this should influence the leaders to enhance the policies so the same occurrence does not repeat itself. The only way to discern whether disclosing practices have improved and the effects on the products will be based on “what information is delivered, how it is delivered, and how it is utilized by receivers” (Loewenstein et al., 2011, p. 427). Ruff (2015) pointed out many suggested actions that would help with monitoring publications for conflict of interest. At this stage some journals require authors to disclose their conflicts, but there doesn’t seem to be follow up or noted attention from the publishers. Loewenstein et al. believed that the scientific community needs to formulate a better mechanism to immediately ensure transparency and to eliminate undisclosed conflicts. By establishing clear institutional policies and processes for COI monitoring in addition to taking more proactive actions to identify COI by editors of science journals; the scientific community can maintain integrity and public trust with their published findings.

**Literature Cited**


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¶1590 Knowledge Check

AIS editors

The Q&As at ¶1590.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 1500 has been understood. Note: For the answer key for ¶1590.1, see ¶1590.3, which appears on a separate page (page 1590:5) for testing purposes.

Discussion topics at ¶1590.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶1590.1 Q&As

1. The university’s “public mission” requires that academic work be disseminated through, for example, which of the following:
   (a) Publications
   (b) Public performances or presentations
   (c) The licensing of intellectual property
   (d) All of the above

2. A university’s *fiduciary* responsibility with respect to research projects generally relates to
   (1) Managing participation in the peer review process
   (b) Overseeing respect for human subject protections
   (c) Proper fiscal management of sponsored funding
   (d) Safeguarding scientific progress under an award

3. The compliance guidance originally proposed by the Department of Health and Human Services Office of Inspector General (OIG) in November 2005 has been withdrawn and is now under the purview of the
   (a) Institute of Medicine
   (b) Research Business Models Subcommittee
   (c) National Academy of Sciences
   (d) Office of Extramural Research

4. Although not required to do so, some institutions have developed compliance programs using the “basic tenets” of which of the following as “core principles”:
   (a) The Belmont Report
   (b) U.S. Sentencing Guidelines
   (c) Federal False Claims Act
   (d) OMB Circular A-28
5. According to ¶1505, business stewardship of sponsored funding might encompass management of all of the following EXCEPT:
   (a) Purchasing
   (b) Property
   (c) Subcontracting
   (d) Animal care and use

6. All of the following could be thought of as the risks of noncompliance with sponsored funding requirements EXCEPT:
   (a) Costly fines and/or penalties
   (b) Reduced research funding either as a grantee or subrecipient
   (c) Sponsor-imposed special award terms and conditions
   (d) Increase in expanded authorities

7. To be most effective, assessments generally should be
   (a) Conducted on a “snap-shot” basis only
   (b) Conducted specifically by internal parties with knowledge of the institution’s policies
   (c) Conducted exclusively by outside experts
   (d) Conducted objectively and without fear of what might be found

8. What mechanism would NIH typically use to review how institutions of higher education were complying, for example, with its financial conflict of interest requirements relating to sponsored funding?
   (a) A-133 audits
   (b) Site reviews
   (c) Subpoenas
   (d) IOM audits
1590.2 Discussion Topics

1. The number and complexity of requirements relating to sponsored programs funding have grown over the years. Why do you think this is? Do you think this trend is likely to continue? Why or why not?

2. What is your role in ensuring compliance with sponsored programs requirements? How does your role differ depending upon the source of the sponsored funding (e.g., federal funds, state money, foundation funding)?

3. Discuss how sponsored program personnel are “trained” in research compliance at your institution. In your opinion, is this training adequate?

4. In ¶1505, sponsored programs compliance is called a *continuum*. What does this mean?

5. In a recent presentation, an official from the National Science Foundation listed the following items as “risk areas.” Where do you think your institution is particularly vulnerable in terms of internal controls for each of these compliance areas?

Risk Areas
- Lack of adequate documentation
  - travel documentation
  - cost-sharing
  - records retention
  - credit card receipts (would likely not constitute adequate documentation)
- Time and effort reporting and procedures
- Separate financial administration for each award, no pooling
- Abuse or violations of institutional conflict of interest disclosure policies and procedures
- Updated/adequate research misconduct policies and procedures
- Subawardee monitoring (and A-133s)
- Residual funds
- Oversight activities (conflict of interest, human subjects protections, animal subjects welfare)

More Risk Areas
- Allowable activities supported
- Allowable costs and cost principles
- Cash management
- Eligibility for awards
• Equipment and real property management
• Period of availability of funds
• Procurement suspension and debarment
• Program income
• Participant support
• Timely required reporting
• Special tests and provisions
• Holding accounts
• Summer salaries
\[1590.3 \quad Answer \ Key\]

Following are the correct answers to the questions included at \[1590.1\].
1. (d) All of the above
2. (c) Proper fiscal management of sponsored funding
3. (b) Research Business Models Subcommittee
4. (b) U.S. Sentencing Guidelines
5. (d) Animal care and use
6. (d) Increase in expanded authorities
7. (d) Conducted objectively and without fear of what might be found
8. (b) Site reviews
PLACE TAB

¶ 1700
Facilities and Administrative Costs
Chapter 1700
Facilities and Administrative Costs

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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter addresses a range of topics relating to facilities and administrative (F&A) costs.

While death and taxes may be the only certainties for many people, for research administrators there is the added certainty that there will always be debate and controversy concerning F&A costs. Whether labeled “indirect costs,” “overhead,” or “F&A costs,” this topic has long been one that is guaranteed to stir passions at colleges and universities. Patrick Fitzgerald of Harvard University provides a highly accessible review of the essential concepts of indirect costs. This chapter is not aimed at cost accountants who analyze and calculate F&A rates. Rather, Fitzgerald presents a very complete overview of this topic for administrators and faculty who have to apply indirect cost rates and who need to understand the impact of actions taken, or not taken, with regard to F&A cost recovery.

In an earlier time, the topic of indirect costs was treated as an extremely arcane, complex subject that could be understood only by members of the indirect cost “high priesthood.” The subject was portrayed to be generally beyond the grasp of faculty members and research administrators. Fitzgerald goes a long way toward demystifying the F&A concepts so that they can be understood by mere mortals.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶1705, as appropriate. Content added to other sections of the chapter over time will provide readers supplementary discussions of related topics (at ¶1720), practical tools (at ¶1730), case studies (at ¶1740), trends data and other related statistics (at ¶1760) and a knowledge check (¶1790).
Facilities and Administrative Costs

Patrick Fitzgerald
Associate Dean for Research Administration
Faculty of Arts & Sciences
Harvard University

Research administrators often have to educate faculty on the importance of indirect cost recovery and the relationship that this reimbursement has on the institution’s ability to reinvest in critical infrastructure improvements and maintain the appropriate level of campus services, including the sponsored programs office. It is not necessary to have a detailed working knowledge of the calculation of indirect cost rates; what is needed is a basic understanding of the essential concepts of indirect costs that will enable a research administrator to explain indirect cost recovery to others.

An overview of indirect/facilities and administrative (F&A) costs follows. This chapter then discusses several of the basic concepts embodied in the indirect cost rate process and explores key issues related to indirect cost recovery, including cost sharing, indirect cost waivers, and strategies for the distribution of indirect cost recoveries.

Research administrators should note that the federal policies and principles that govern reimbursement of costs associated with externally sponsored activities are promulgated by the Office of Management and Budget (OMB) in 2 CFR 200, “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards” commonly referred to as “Uniform Guidance.”

What Are F&A Costs?

Universities conduct sponsored research and other scholarly activities and seek funding for these projects from external sponsors. The performance of research, and other major activities, incurs expenditures that can be readily identifiable to a specific project or activity and are assigned to the project as direct costs. Conversely, costs incurred to support the institution’s mission activities that cannot be readily identifiable or directly assigned to a major project or activity with a high degree of accuracy are considered to be indirect costs. Ideally the funding from sponsors will reimburse the institution for the total cost of the project, including all direct and indirect costs.

Indirect costs are expenses that colleges and universities incur in support of the institution’s major, mission-related activities, primarily identified as instruction, organized research, and public service. The term “facilities and administrative” (F&A) costs, “indirect” costs, and “overhead” costs are used interchangeably in this chapter.

Another way to think of direct and indirect costs is as primary and secondary.

Reminder
Total project costs = direct costs + indirect costs
costs. Direct costs are considered to be primary because these costs are attributable to specific projects. Indirect costs are secondary costs that cannot be precisely assigned to projects and these costs are assigned to a project as a percentage of direct costs. Although F&A costs are necessary for the performance of a project or activity, the fact that these costs cannot be directly attributable to a specific project or activity contributes to a perception that these costs are nonessential or are for activities that are significantly less important than direct activities.

In fact it is not uncommon to hear faculty suggest that the indirect cost rate is simply an arbitrary tax that the institution places on a project that leaves the faculty less money to perform the research work. Misunderstanding by faculty about the nature of indirect costs and the importance of indirect cost recovery as a source of unrestricted revenue to the institution can breed contentiousness or even mistrust.

An informed research administrator can dispel some of the myths about indirect costs that are prevalent on campuses. The office of sponsored programs (OSP) has a close working relationship with faculty and is charged with interpreting federal regulations and the institution’s policies. It is essential, therefore, that sponsored programs staff members have an understanding of the fundamentals of the indirect cost process so they can explain this critical information to faculty and campus administrators.

§1705.2 The F&A Calculation

Institutions which receive more than $10 million in direct federal funding are required to use the “Standard Form for Submission” (“long-form”) F&A rate proposal for the negotiation of an indirect cost rate with the federal government.1 Because of the complexity of the long-form process, most institutions have staff that specializes in the calculation of the rate. Which office is responsible for the F&A calculation and negotiation varies from institution to institution. In some cases the responsibility rests with the office responsible for post-award financial administration, for example, the controller’s office. In other institutions the function is part of the pre-award sponsored programs office or the budget office. A common title used for the F&A office is “cost analysis” and F&A specialists are often called “manager of cost analysis” or “director of cost analysis.”

Regardless of the institution’s organizational structure, the office responsible for cost analysis and F&A rate calculation must coordinate its activities and responsibilities with other central administrative offices and academic departments. The F&A calculation is truly a joint responsibility because of the vast array of data and institutional knowledge that is necessary to compute the rate.

Cost Categories

The research F&A rate is composed of two general cost categories: facilities (“F”) costs and administrative (“A”) costs. These categories are discussed individually below.

1 2 CFR 200, Section 200.414
Facilities Costs. The facilities category includes costs associated with buildings and improvements used directly for, or in support of, sponsored research. Facilities costs include

◆ depreciation expenses for buildings and equipment,
◆ plant operations and maintenance (e.g., maintenance, utilities, and custodial costs),
◆ externally paid interest, and
◆ library costs.

Each of the subcategories of facilities costs (which are commonly referred to as cost pools) is allocated to research as well as the other direct and indirect functions of the institution.

The portion of the institution’s facilities costs included in the research F&A rate is based on the functional use of the institution’s buildings and space — primarily, the proportion of the square footage of campus buildings used for research compared to the total campus square footage. Institutions maintain a detailed space inventory database to capture and compile data related to campus facilities. The space inventory includes all campus rooms and important attributes of each room including the physical dimensions, the room type (laboratory, classroom, etc.) and the functional use of the room (i.e., instruction, organized research, etc.)

Many institutions use a space survey to determine the functional categorization of rooms used for multiple purposes, for example, research and instruction. The space inventory system and the space survey are critical processes in the F&A rate calculation because the room use data determines the amount of facilities costs that the institution allocates to the organized research function. Accurate space inventory data requires the expertise and cooperation of PIs and departmental administrators, and emphasizing the importance of the data can help garner the cooperation of the academic community in helping to ensure the integrity of the space data.

It is also common for universities to install utility meters on buildings to more accurately assign costs to specific buildings in order to recoup the higher utilities costs typically associated with research-intensive facilities.

Administrative Costs. The administrative cost category includes costs for offices that provide institution-wide general and administrative support services, school or college administration, department administration, and sponsored programs services. A fraction of the costs of each of these offices is assigned to the research F&A rate to reflect the level of support that each office provides to the institution’s sponsored research programs.

For example, an office such as human resources, which provides general administrative services to the entire campus, will have a smaller percentage of its costs allocated to research than the sponsored programs office, which, of course, is primarily focused on the administration of sponsored research projects. Each of the subcategories (cost pools) of administrative costs is allocated to research and other
direct functions of the institution based on expenditures.

For central services that benefit the entire institution, total campus expenditures are used in the allocation formula. For college and departmental administration expenses, the allocation to research and other functions is based on the college’s expenditures or the department’s expenditures.

Once each of the facilities and administrative cost pools is allocated across the institution’s direct functions, the amount of each cost pool’s allocation to research is aggregated to arrive at total facilities and administrative costs assignable to research. The research rate is calculated by dividing the F&A costs allocated to research by the modified total direct cost of research (MTDC). The ratio of F&A costs to direct costs, expressed as a percentage of MTDC, is the basis for the F&A rate the institution negotiates with its cognizant federal agency. (See Figure 1 for background on a cognizant federal agency.)

It is important to note that the federal government limits the reimbursement of administrative costs and the administrative components of the F&A rate cannot exceed 26 percent, i.e., 26 points in the rate.

Once the F&A rate is negotiated, it is documented in a formal agreement with the cognizant agency and, subject to exceptions described later in this chapter, is applied to research projects sponsored by all federal agencies during the period covered by the rate agreement.

For purposes of calculating and applying the F&A rate, direct costs are expressed as modified total direct costs (MTDC). MTDC is direct costs less certain costs called “modifiers” (e.g., capital expenditures, equipment, tuition, subcontracts over $25,000, etc.).

¶1705.3 Recovering F&A Costs from Sponsors

When a research project is sponsored by an external entity, the sponsor is expected to reimburse the institution for the full cost of the project, including both the costs

Reminder

Modified total direct costs (MTDC) =
direct costs – modifiers
that are directly identifiable to the project and a proportionate share of the F&A costs that the institution incurs in support of all its research projects. The reimbursement of direct costs is based on actual expenses incurred in the performance of the project. Because F&A costs cannot be identified to specific projects, reimbursement of these costs is based on a rate that reflects the average of F&A costs incurred by the university in the performance of all its sponsored research projects.

The F&A rate is negotiated with the federal government and is automatically applied to the project’s modified total direct costs (MTDC), which enables the institution to recoup indirect costs as well as direct costs. However, in some instances Federal and non-federal sponsors pay less than the negotiated rate and a waiver of indirect cost is necessary. Waivers are discussed later in this chapter.

**Example**

An F&A rate of 60% (MTDC) for sponsored research means that for every dollar of modified total direct costs the institution spends on its research projects, it incurs an average of an additional $0.60 for F&A costs.

**Short-Form Method**

The process described above is used by large research institutions that employ a procedure for calculating the F&A rate known as the “long-form” method. For institutions which receive less than $10 million in direct federal funding, a simplified procedure known as the “short-form” method may be used to compute the F&A rate. Under this simplified approach, the institution’s most recent annual financial statements and supporting documentation are the basis for determining the F&A cost rate applicable to all sponsored agreements. The institution has the option to compute a rate using either a formula based on salaries and wages (S&W) base or the MTDC base used in the long-form calculation. The rate has to be applied to the same base on which the rate is calculated.

The simplified method compares total F&A costs to total direct costs (S&W or MTDC) to compute a single rate. This process does not differentiate between the institution’s major functions (i.e., instruction, organized research, public service, etc.) in the allocation of F&A costs or the development of the direct cost base. The rate derived from the simplified method is applied to all types of sponsored agreements.

**Recovery vs. ‘Recoverable’**

The F&A rate is an approximation of the costs that an institution incurs in support of its major programs. The rate is calculated based on historical costs for the most recently completed fiscal year, which is known as the “base year.” As explained earlier, the rate is negotiated with the federal government and is applied to externally

**Reminder**

\[
\text{Recoverable F&A - actual F&A recovery = under-recovery}
\]
sponsored programs. Theoretically all sponsored projects will pay a fair share of the institution’s F&A costs by paying the negotiated rate. In reality this is not true; sponsors all too often do not pay the full F&A rate.

The “recoverable” amount of F&A represents the theoretical level of reimbursement that the institution would receive by applying the negotiated rate to all sponsored projects. “Recovery” refers to the actual reimbursement of F&A costs that an institution receives from sponsors. The difference between the recoverable F&A costs and actual F&A recovery is referred to as an “under-recovery.” (See example below.) When the sponsor doesn’t pay the full rate the shortfall in F&A reimbursement must be absorbed by the institution using other resources.

**Example**

If an institution has a negotiated rate of 60% and a sponsor limits the payment of F&A costs to 20% MTDC on a project with direct expenses of $100,000, the recoverable F&A cost is $60,000 ($100,000 x 60%), actual recovery is $20,000 ($100,000 x 20%) and the under-recovery is $40,000 ($100,000 x (60%-20%)).

**Waivers**

If an institution accepts a project that has an “under-recovery” of F&A costs, a source other than the sponsor will have to pay the difference between the negotiated rate and the rate the sponsor is willing to pay. Accepting a project that doesn’t pay the full F&A rate results in a reduction of revenue from the sponsor — a process known as a waiver. The waiver may be explicit or implied, depending on the institution’s policies and practices.

Institutional policies concerning waivers vary as to

◆ how and when waivers occur,
◆ who is authorized to approve a waiver, and
◆ what funds are used to absorb the waived F&A costs.

In some cases the PI, department, or school may be asked to provide discretionary funds to pay the waived F&A, or the institution may absorb these costs by using other institutional resources to fund the under-recovery. (Strategies for dealing with under-recovery are discussed below.)

**Sponsor Limitations on F&A Reimbursement.** In assessing the amount of under-recovery on an award, it is important to note that not all sponsors pay F&A costs on the same basis as federal sponsors. As described above the institution negotiates the F&A rate with its cognizant federal agency and the rate is applied to all awards from all federal agencies (although, as discussed later, there are exceptions). Federal rules dictate that the rate be computed on a modified total direct cost (MTDC) base and applied to awards on a MTDC base.

However, nonfederal sponsors are not bound by the federal rules and they often pay reduced F&A rates that are applied on a total direct cost (TDC) basis, not MTDC. While the exact formula may vary depending on the sponsor, the normal
practice with a TDC rate is to apply the sponsor’s overhead rate to all direct costs on the project; there are no direct cost “modifiers” that don’t receive an F&A charge.

When a project with a TDC rate is awarded, the institution should charge overhead in accordance with the sponsor’s rules, not automatically apply the MTDC formula. For nonfederal awards, this means that F&A should be charged to equipment, capital expenditures, tuition, and subcontracts, unless this violates the sponsor’s policy or terms of the agreement. The appropriate way to measure the under-recovery on a TDC award is to compute what the under-recovery would be if the federal MTDC rules were applied and compare this result to the actual indirect cost recovery generated using the sponsor’s TDC formula.

**Oversight.** Because F&A recovery constitutes a significant source of income for most research-intensive universities, the revenue stream that is generated from the application of the F&A rate must be carefully managed. Institutions should have a policy governing F&A waivers that will minimize under-recovery and maximize recovery. F&A reimbursement is critical since it enables the institution to reinvest in the infrastructure needed to support the research enterprise. Request for waivers should be carefully reviewed and approved by a senior official at the institution with budget authority. In decentralized institutions where indirect cost recovery flows back to a college or school, the waiver request should be directed to a dean or other senior official.

The institution should also have a system to track under-recoveries that result from waivers so that the budget impact of the waiver policy is clearly understood by management. It is unwise to allow waivers to happen without careful consideration of the budgetary implications and approval by senior management. Institutions of higher education typically have effective policies and procedures to monitor and control the expenditure of institutional funds. Institutions should employ the same rigor in implementing processes to control the loss of recovery that occurs when indirect costs are not recovered because of waivers.

**Use and Distribution of F&A Recoveries**

One common misconception is that F&A recovery received from federal sponsors (or nonfederal sponsors) must be used to support the institution’s research programs. In fact F&A recovery is an *unrestricted* revenue source for the institution and there is no externally imposed restriction on how these funds can be used. For most private institutions F&A recovery dollars are commingled with tuition, unrestricted gifts, and endowment earnings, and all are used to support the university’s activities. For public institutions the state may place restrictions on the use of F&A recoveries. From the federal government’s perspective, however, there are no restrictions on the use of these funds.

Although F&A recovery is a reimbursement for costs an institution spends in support of sponsored research; the institution has discretion over the use of these funds. Many universities have a policy that provides for the sharing of F&A recovery with departments, schools, or principal investigators (PIs). How these funds are
distributed across the institution, if at all, is an institutional decision and there are nearly as many different formulas for the distribution of F&A recovery as there are institutions that receive F&A recovery.

An institution may keep all F&A recovery in the general fund and distribute none of this revenue to schools, departments, or investigators. In fact most institutions have a formula to distribute at least a portion of the recovered F&A. For example, an institution may return to departments the portion of F&A recovery related to the departmental administration pool. Or an institution may choose to return to a department the depreciation expense on equipment purchased by the department. The decision whether to return F&A recovery, and the formula used to distribute the recovery, are the prerogatives of the institution.

Universities that employ a “responsibility center management” (RCM) approach to institutional budgeting and revenue sharing may give schools or departments greater control over the use of F&A recovery. RCM institutions typically assess a “tax” to each school to pay for its fair share of central administration and support services. In return the schools keep all, or a portion of, unrestricted revenue, including tuition, gifts, and F&A recoveries.

When an RCM process is used (a concept that is often described as “each tub on its own bottom”) the school that waives indirect cost on research projects is waiving its own revenue. Each school is responsible for paying its own operating costs, along with a share of the central services it receives, and has a greater degree of control over its revenue streams. One effect of RCM budgeting is to shift the decision on whether to waive or reduce indirect cost recovery on projects from the central administration to the RCM unit level. This greater level of unit responsibility for controlling revenues and expenses in a RCM model typically causes the RCM unit to evaluate waiver requests much more carefully.

The important point to consider when evaluating the different policies on F&A recovery is that it is the institution’s decision as to how or if to distribute F&A recovery received from external sponsors, not the decision of the federal government or the nonfederal sponsor. Public institutions may have state regulations that govern the use of F&A recovery; however most institutions individually make the decision on how these funds are used.

**Strategies for Dealing with Under-Recovery of F&A Costs**

Under-recovery of F&A is a significant issue for every university. Some of the factors that cause under-recovery cannot be controlled. Certain federal agencies or federal programs have F&A rates that are significantly lower than the institution’s negotiated rates. For example awards from the U.S. Department of Agriculture (USDA) typically carry congressionally mandated F&A rates which are significantly lower than an institution’s negotiated rate and training grants from the National Institutes of Health (NIH) pay F&A rates of 8 percent. Funding from nonfederal sponsors, including charitable foundations, and nonprofit associations often has indirect cost rates that are significantly lower than the institution’s federal negotiated rate.

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2 For FY 2014, USDA capped indirect costs at 30% of awarded federal funds
In many cases the sponsor has no flexibility in the amount of F&A it can pay and the institution has no choice but to accept the lower rate or turn down the funding. However even in these situations there are strategies that universities can employ to minimize under-recovery.

Nonfederal Sponsors. A university has more flexibility with policies governing nonfederal sponsors than it does with federal agencies, and the institution can use this flexibility to its advantage. Since nonfederal sponsors are not subject to federal regulations, there may create opportunities to charge these sponsors a F&A rate higher than the negotiated rate. For example the 26 percent federal administrative cap does not have to be applied to awards from nonfederal sponsors. Therefore an institution may decide to charge a higher “uncapped” F&A rate to industrial sponsors to recover an amount that is closer to its true costs.

Similarly other types of costs that are not allowed to be direct charged to federal projects may be charged to nonfederal agreements, with sponsor approval. This could include costs that are normally included in the F&A rate, such as administrative and clerical costs, rent, maintenance, or other facilities-related costs. It may also include costs that are expressly unallowable in federal agreements such as first-class or business-class airfare or entertainment costs, with sponsor approval.

When a nonfederal sponsor with a reduced indirect cost rate agrees to pay for costs that are considered “normally indirect” by the federal government, this can help offset the loss of F&A revenue. Other institutional resources that would otherwise be used to pay for the “unallowable” costs now can be used for other purposes because sponsor funds will be used to pay these costs.

For an institution that tracks under-recovery, or requires a school, department, or PI to pay for under-recovery, it may choose to give “credit” to the unit for costs it charges directly to nonfederal grants and contracts that could not be charged to federal grants and contracts. This credit will reduce the amount of under-recovery and serve as an incentive to the unit or PI to direct-charge costs it would not otherwise assign to the sponsored project. In situations where an institution treats federal and nonfederal sponsors differently, it is important that these circumstances be adequately disclosed in the Cost Accounting Standards (CAS) disclosure statement (DS-2) and the institution’s written policies. (See Figure 2 for background on the CAS.)

Figure 2: The Cost Accounting Standards

The Cost Accounting Standards (CAS) were established by the Cost Accounting Standards Board (CASB) for colleges and universities in 1994. CAS have had a profound effect on the direct charging of certain costs such as clerical salaries and has impacted the charging of office supplies, membership costs, postage costs, and local phone charges. Under CAS universities receiving federal awards of $50,000,000 or more must complete a lengthy and detailed Cost Accounting Standards disclosure statement (DS-2).

In many cases the sponsor has no flexibility in the amount of F&A it can pay and the institution has no choice but to accept the lower rate or turn down the funding. However even in these situations there are strategies that universities can employ to minimize under-recovery.

Nonfederal Sponsors. A university has more flexibility with policies governing nonfederal sponsors than it does with federal agencies, and the institution can use this flexibility to its advantage. Since nonfederal sponsors are not subject to federal regulations, there may create opportunities to charge these sponsors a F&A rate higher than the negotiated rate. For example the 26 percent federal administrative cap does not have to be applied to awards from nonfederal sponsors. Therefore an institution may decide to charge a higher “uncapped” F&A rate to industrial sponsors to recover an amount that is closer to its true costs.

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3 2 CFR 200, Section 200.419
Incentives. Institutions can encourage PIs, departments, and schools to seek full reimbursement of F&A by implementing an incentive system. For example, if an industrial sponsor is willing to pay an F&A rate higher than the negotiated federal rate, a portion of F&A in excess of the negotiated rate could be given back to the PI or department.

Another type of incentive is to encourage service centers to add F&A on billings to non-university external users. Service centers are units within the institution that bill users for goods or services.

When a service center charges the grant of an internal user the institution automatically applies the applicable F&A charge to the service center fee. However, when the service center generates a bill to an external user the indirect cost is not automatically applied. Unless the service center adds an indirect charge to its invoice, the external user will pay a lower rate than the internal user. If the service center adds the indirect cost to the invoice it collects the F&A whereas the F&A that gets applied to the charge to the internal grant or contract flows back to the institution, not the service center. (For a discussion of some challenges in managing a service center, see ¶1720.1.)

Another incentive that can be used is to return to a PI, department, or school a fraction of the F&A recovery on all sponsored projects that pay the full F&A rate. In situations where the sponsor has some flexibility in the amount of F&A it pays, industrial sponsors for example, the opportunity to share in the recovery of F&A may encourage the PI to advocate for full F&A reimbursement from the sponsor or support the institution’s position to charge a higher rate than the federal rate.

Accountability. The key to maximizing indirect cost recovery and effectively managing and minimizing under-recovery is accountability. Since under-recovery represents a reduction of revenue to the institution and places greater demand on the use of institutional resources to pay for costs that would otherwise be borne by the external sponsor, it is critical that under-recovery be monitored and controlled. If the institution retains most of its indirect cost revenue and distributes only a portion, it should tightly control waivers and track the amount of under-recovery. (See earlier discussion of waivers.)

If the institution has a policy of retaining F&A recovery centrally and it permits a unit to waive F&A, there will be little incentive for the unit to limit F&A waivers. In fact such a policy creates a situation that may make the PI more willing to try to influence the sponsor to reduce F&A on his or her project. A waiver helps the PI by reducing the indirect costs on the project, thereby making more funding available for direct costs. However, this is a loss of revenue to the institution.

Although the waiver benefits the PI, it negatively impacts the institution’s bottom line by increasing the F&A under-recovery. A more prudent policy is to establish a review and approval process for waivers to ensure that they are granted in situations where it is necessary and in the best interest of the institution, not an individual investigator.

Establishing a mandatory high-level approval for waivers and a system of
tracking indirect costs waivers and under-recovery will provide management with a process to assign responsibility, ensure accountability, and control the amount of reduced F&A. These measures will provide greater institutional awareness and can help to minimize lost revenue due to under-recovery.

1705.4 Administrative and Clerical Costs

Uniform Guidance (UG) specifies that administrative and clerical salaries and other costs such as office supplies, postage, and local telephone should normally be treated as F&A costs. UG does provide for exceptions to this general rule and allows the direct charging of administrative staff when the costs are integral to the project and meet other conditions specified in section 200.412.

Direct charging of costs that are normally considered to be indirect costs places a burden on the institution to ensure that it follows a process to identify and justify these costs. The treatment of these costs must be consistent with the requirements of UG, the policy of the sponsor, the terms and conditions of the award, and the institution’s policy and disclosed cost accounting practices (i.e., the DS-2 disclosure statement).

When administrative and clerical costs are direct charged, the potential may exist that the PI is “double-dipping” by charging the project for administrative support both directly and indirectly through the F&A rate. According to CAS inconsistent treatment occurs when costs incurred for the same purpose and circumstance are charged both directly and indirectly. It is the responsibility of the PI and the institution to substantiate that the project budget is prepared in a manner consistent with sponsor requirements and institutional policy and to justify how administrative costs direct charged to a project represent a different purpose and circumstance than similar costs billed through the F&A rate.

To ensure that there is adequate substantiation that the PI has complied with the various federal requirements, it is recommended that the proposal explicitly budget the administrative and clerical costs and include a written justification describing why the administrative costs are necessary for the performance of the project. By specifically identifying and justifying the administrative costs in the budget, the institution enables the agency to review the appropriateness of these charges. By following this policy, the institution will develop an audit trail supporting its “exceptional” treatment of administrative costs as direct costs as well as a process to facilitate sponsor review. (Note: inclusion of costs in the award budget does not constitute sponsor approval.)

There are alternative strategies available to an institution that will help to avoid the problems and requirements associated with the direct charging of “normally indirect” costs. Although the UG provides an opportunity for the institution to direct charge administrative costs to a project under certain conditions, some institutions prohibit this practice and charge all allowable administrative costs through the F&A rate. The difficulty with this strategy is that institutions with administrative costs in excess of the 26 percent cap do not recover the full costs of administration.
If an institution that is over the cap increases its administrative costs, or shifts administrative costs from direct charges to indirect, it will receive zero recovery of these additional administrative costs. In situations where it is justifiable and approved by the sponsor it would be advantageous for the institution to direct charge administrative costs and recover a higher proportion of the costs.

‘Substitution’

Another strategy to deal with the hurdles associated with the direct charging of administrative costs is one of “substitution.” Prior to the regulatory changes enacted in the mid-1990s, direct charging of administrative costs was more prevalent than it is today. At that time it was not uncommon for PIs to view grants and contracts as a source of funding to pay for administrative support.

Despite the limitations, some PIs may attempt to direct charge administrative personnel because institutional funding does not provide adequate support for administrative staff. Some of these same institutions also do not charge the full amount of research staff salaries that are billable to the sponsored agreements worked on.

For example, some institutions have a policy to pay faculty academic year salary and not charge faculty research effort to grants and contracts, during the academic year. In these situations institutions may be direct charging costs that are problematic (i.e., administrative salaries) and not direct salary that is fully justifiable. This situation presents an opportunity for substitution and align the institution’s costing practices more closely to the requirements of UG. The institution may choose to direct charge faculty salaries and return to the PI the budget savings resulting from sponsor payment of these salaries. The PI can use the salary “savings” to pay for administrative support, thereby minimizing, or eliminating, the need to direct charge this administrative support.

¶1705.5 Avoiding F&A Costs

The sponsored programs office should recognize that PIs may look for ways to minimize indirect cost charges on their sponsored projects. One method is to “bundle” equipment purchases so that the cost exceeds the institution’s dollar threshold for the capitalization of equipment. This threshold can be as high as $5,000 per unit cost and is determined by the institution.

Because F&A is assessed on non-capitalized costs, including materials and supplies and equipment purchases below the capitalization threshold, but not on equipment and other capital purchases, it is to the PI’s advantage if equipment purchases exceed the capitalization level, thereby avoiding F&A costs. It is important to examine equipment purchases to ensure that they are classified based on the “per unit” cost in accordance with the institution’s capitalization policy. For example, coding two $2,500 workstations as a purchase of a $5,000 “computer system” rather than two separate units may be inconsistent with the institution’s policy and done simply to avoid overhead charges. Other costs, such as a maintenance agreement may be coded as “equipment” to avoid indirect costs.
Rebudgeting

“Rebudgeting” of project costs is another way to avoid F&A charges. For example, an approved project budget may include salary for a research technician, a cost that is subject to F&A. If a PI subsequently uses the amount budgeted for the technician salary to pay for equipment, F&A recovery on the project will be lowered because the funds were used for a non-overhead-bearing cost.

Rebudgeting may be necessary because the focus of the project changed, thus creating the need to purchase equipment that was not anticipated when the project budget was prepared. Or the rebudgeting may simply be a tactic to reduce F&A on the project or to circumvent the sponsor’s policy requiring approval of equipment purchases. Sponsored programs staff and departmental administrators should carefully review significant differences between budgeted F&A recovery and actual F&A recovery to ensure that the circumstances are appropriate and rebudgeting is done in accordance with the sponsor’s policies.

Subcontractor or Consultant?

Another way of avoiding F&A is the misclassification of a consulting arrangement as a subcontractor relationship. There is a clear distinction between a subcontractor’s role on a project versus the role a consultant plays. The following are characteristics of a subcontractor:

◆ Working independently, the subcontractor performs a portion of the work scope of the project and acts as a PI in directing this portion of the project. The work under the subcontract is done at a location other than the awarding institution.

◆ The consultant provides needed expertise but does not independently pursue a line of inquiry on the project. A consultant works under the direction of the PI, and the consultant’s work may take place at the awarding institution.

A PI may attempt to characterize the consultant as a subcontractor to reduce the F&A charge on a project because only the first $25,000 of a subcontract is subject to F&A and the entire amount of a consultant’s cost is subject to F&A. However, this treatment is inappropriate and most universities have policies differentiating subcontractors from consultants.

Aside from differences in F&A treatment, there are other significant implications for classifying a consulting agreement as a subcontract. For example, a subcontractor typically owns any intellectual property created on its portion of the project; the consultant has no intellectual property rights. It is important that PIs and administrators understand the difference between subcontracts and consulting agreements and review proposals and awards to ensure that the costs are properly classified.

1705.6 Impact of Cost Sharing on F&A Rate

Cost sharing is the cost of a project not borne by the sponsor. A sponsor may require an institution to contribute to the cost of a research project, or the institution may choose to offer to cost share a portion of the project cost to make its research proposal more attractive to the sponsor. Section 200.306 of the Uniform Guidance includes
the following provision for cost sharing, which should limit “voluntary” commitments by institutions: “Under federal research proposals, voluntary committed cost sharing is not expected. It cannot be used as a factor during the merit review of applications or proposals, but may be considered if it is both in accordance with Federal awarding agency regulations and specified in a notice of funding opportunity.”

To be eligible as cost sharing, contributed costs must meet the same requirements as direct-charged project costs; the costs must be allowable, reasonable, and necessary for the performance of the project. When an institution includes a cost sharing commitment in a research proposal, the commitment becomes part of the agreement with the sponsor.4

Sources of cost sharing are
◆ cash,
◆ contributed effort of faculty and other researchers,
◆ graduate student tuition,
◆ equipment,
◆ materials and supplies, and
◆ in-kind and third-party contributions.

Waived or reduced F&A recovery may also be used as cost sharing with the prior approval of the sponsor.

Whether cost sharing is mandated by the sponsor or is a voluntary contribution, the institution must be able to demonstrate to the sponsor that it has fulfilled the cost sharing commitment and the actual cost sharing has been properly classified as a project cost. The classification of cost sharing can have a significant impact on the institution’s F&A rate. Since cost sharing is a direct research cost, identifying institutional cost sharing generally results in an increase to the direct cost (modified total direct cost or MTDC) base, which reduces the F&A rate.

Figure 3 illustrates the impact on the F&A rate when cost sharing is added to the organized research base. By identifying $10 million in direct research cost sharing, the institution’s rate is reduced by nearly 3 points, from 60.0 percent to 57.4 percent, despite the increased allocation of administrative costs.

| Figure 3: Organized Research F&A Rate Calculation (000’s omitted) |
|---------------|-----------------|-----------------|-----------------|
|               | Before Cost Sharing | Cost Sharing | After Cost Sharing |
| Administrative Costs | 31,200 | 2,600 | 33,800 |
| Facilities Costs | 40,800 | 0 | 40,800 |
| Total F&A Costs | 72,000 | 0 | 74,600 |
| Direct (MTDC) Base | 120,000 | 10,000 | 130,000 |
| F&A Rate | 60.00% | 57.40% |

4 For more information on cost sharing commitments please refer to OMB Memoranda M-01-06, “Clarification of OMB A-21 Treatment of Voluntary Uncommitted Cost Sharing and Tuition Remission Costs” https://www.whitehouse.gov/omb/memoranda_m01-06/
Cost sharing can have a profound impact on an institution’s budget. Whether cost sharing is mandatory or voluntary the institution must provide the resources to meet the cost sharing commitment it makes. The institution also absorbs the F&A costs associated with the cost sharing expenditures. It is important to realize this secondary impact when the institution computes the amount of cost sharing included in the research proposal. The F&A associated with the committed cost sharing should be included in the total amount of cost sharing on the project.

In summary, it is important for the institution to recognize the full impact of cost sharing. Because the impact can be significant, an institution should be prudent in the amount of cost sharing it offers on research projects and should consider limiting such commitments to only those situations in which cost sharing is required by the sponsor.

Gift vs. Grant

External resources come to the university in many forms, including as sponsored agreements (grants, contracts, and cooperative agreements) for research, educational, and public service purposes; funds appropriated from federal, state, and local governments; and gifts. Making a distinction between external funds that support specific projects (“grants”) from those funds that have few, or no, restrictions on the use of the funds (“gifts”) is not always easy.

Depending on the institution’s policies, differentiating between a grant and a gift can have significant indirect cost ramifications which can trigger disagreements over the proper classification.

From the PI’s perspective, coding a transaction as a gift may be preferable to classification as a grant because there is a lower institutional assessment on gifts. From the institution’s perspective, a grant classification may result in higher indirect cost recovery. However, it is common for a non-federal entity to provide funds that may restrict the F&A that can be charged in order to provide more money for the direct support of the PI.

The office of sponsored programs may lean towards classifying external funds as a “grant” because it will increase the institution’s sponsored research volume and enhance its institutional research ranking, and perhaps bolster the reputation of the sponsored programs office. On the other hand, staff from the institution’s development office may argue for a “gift” classification because this would add to the institution’s fundraising total and likely enhance the reputation of the institution and the performance of the development office. In some cases a compromise is reached and the funds are counted both as a gift and a grant for internal reporting purposes.

Factors that are used to distinguish grants from gifts include

◆ whether the funds require a defined statement of work,
◆ period of performance,
◆ set of deliverables,
◆ reporting requirements to the sponsor, and
◆ restrictions on the use of unused funds, or return of funds to the sponsor.

Gifts typically do not include any of these requirements and carry fewer restrictions. However, for funding received from foundations, industrial companies, and individuals, the distinction between a grant and a gift sometimes can be blurred and officials within the institution may differ on the proper classification of the funds.

Every institution should have a policy for classifying gifts versus grants. Disagreements over the classification of these funds will occur without clear policies defining gift versus grant. Clarifying the distinctions of each will help to ensure a consistent process for classifying funds and resolving disagreements.

**Impact on F&A Calculation**

The classification of external funds as a grant means that the award is subject to the institution’s full F&A rate. If the grantor doesn’t pay the full F&A rate, an F&A rate under-recovery will occur and the institution will have to use other resources to pay the portion that the sponsor does not reimburse to the institution. Gift funds may be assessed a nominal F&A rate by the institution or the institution may choose to exempt gifts from internal assessments of F&A.

**¶1705.8 The Research Dollar**

The F&A process is complicated; therefore, the F&A rate is frequently the subject of misunderstanding on campuses, at Federal agencies, and in Congress. Research administrators often encounter misconceptions of what costs the rate includes and how it is calculated and applied. An example of a common misconception is the belief that an institution with an F&A rate of 60 percent collects $0.60 cents in F&A for every dollar of research funding. This, of course, is not true. The F&A rate is applied to modified total direct costs (MTDC) not total direct costs (TDC).

Every dollar of research funding an institution receives from sponsors is used to pay for both direct costs and indirect (F&A) costs of research. Although certain direct costs such as equipment, subcontracts, and tuition are “modifiers” and not subject to F&A, these are essential and significant project costs. When one considers that the research funding an institution receives is used to pay for direct costs, “modifiers,” and F&A costs, the ratio of F&A costs to total research costs is much lower than the MTDC rate.

Survey information collected by the Council on Governmental Relations (COGR), an organization of major research universities, provides an insight into the relationship of direct and indirect costs and how much of a dollar of federal research funding is used to support indirect (F&A) costs. The 102 COGR institutions included in the 1998 survey reported a total of $7.6 billion in federal sponsorship for the

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year. This was made up of $5.7 billion in expenditures for direct costs ($4.5 billion in “MTDC” and $1.2 billion in “modifiers”) and $1.9 billion in F&A costs. For this group of universities, F&A reimbursements represented only 25 percent of total federal funding for research ($1.9 billion out of $7.6 billion). Based on this survey one can observe that only $0.25 of every dollar of federal research funding is used to pay for F&A costs, whereas $0.75 of every dollar pays for direct costs.

An analysis of research expenditures for Harvard University supports the COGR data (see Figure 4: The Federal Research Dollar in the Harvard University Rate Area). For Harvard, $0.69 of every dollar of Federal funding was for direct costs and $0.31 was for the reimbursement of F&A costs. The administrative component of the F&A recovery was $0.12 and the facilities component was $0.19.

The “research dollar” is a simple and effective analysis that institutions can prepare to explain how research funding is used at the institution. It is an especially useful tool to counteract the misconception held by many on campus, that a majority of sponsored research funds are used to support indirect activities.

### Conclusion

Indirect/F&A costs are real costs that are incurred to support an institution’s primary activities, including research and instruction. For externally sponsored activities, if the sponsor doesn’t pay its share of F&A, the costs don’t disappear; the costs must be paid from other resources. Institutions that waive or reduce F&A costs on a research project are subsidizing the cost of the research. When research projects are subsidized, the resources used to pay for this portion of the project must come from other unrestricted resources, including tuition, gifts, and endowments, and strain the institution’s ability to support its non-research activities.
The determination of the F&A rate can be a complicated and, at times, confusing process. It is often difficult to accurately separate instructional activities from research activities since both activities often involve the same people and occur in the same “spaces.” Nonetheless the costs of infrastructure and support activities that make up the F&A pools are essential to the operation of institutions of higher education. The recovery of these costs is also essential since it enables the institution to reinvest in the infrastructure and continue to provide the services necessary to support its mission activities.

Because the F&A process is complicated, few individuals on campus have an in-depth understanding of it. For many the F&A recovery is a misunderstood process and misunderstanding can lead to disagreement. Sponsored programs administrators must be knowledgeable about the nature of the indirect cost rate, the components of the rate, and the way the rate is applied. Sponsored programs staff should possess this basic knowledge of the fundamentals of the F&A process so they can explain this mission-critical process to faculty, help to counteract misconceptions about F&A, and help to minimize disagreements over F&A recovery on campus.
1720 Supplementary Material

This section includes expanded coverage of topics relating to facilities and administrative cost issues and related topics. These materials are culled from a variety of authoritative sources.

1720.1 Common Challenges in Managing a Service Center

Tracey Fraser, Associate Controller, Post-Award Administration, California Institute of Technology

Service centers raise an interesting array of research compliance issues. This article discusses a few of the more common challenges as well as how to compute the basic rate calculation.

Service centers, sometime known as recharge centers, are units that provide goods or services (either technical or administrative) to other users within an organization. Service centers recover the cost of operations through charges to users and are expected to break even over a period of time. Research activities are normally not undertaken within a service center itself, but the goods or services provided to other units allow those units to conduct research.

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<td><strong>Specialized Service Facilities</strong> are characterized as “the costs of services provided by highly complex or specialized facilities operated by the institution, such as computers, wind tunnels and reactors.” (OMB Circular A-21, Section J.47)</td>
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<td>There is no specific mention of “service centers” in Circular A-21.</td>
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Little Available Guidance

Specific regulatory guidance is somewhat lacking in this area. Universities tend to develop service center policies and procedures based upon the interpretation of (somewhat dated) audit reports and brief, almost anecdotal, references to service centers in the OMB Circular A-133 Compliance Supplement and the Cost Accounting Standards, and hold it all together with the application of general costing concepts established by OMB Circular A-21.

The compliance issues come into play when service center rates are charged to federal awards. Universities should have in place processes to ensure that (1) the rates charged are based upon allowable costs and do not include any element of profit, and (2) the federal government is in no way subsidizing other users of the facility.

1 This discussion is based on material presented at the NCURA FRA Conference, April 4, 2006.
Rate Calculation

The basic service center rate calculation is as follows:

\[
\text{budgeted cost (+/- prior period under-/over-recoveries)} = \text{rate} \times \text{budgeted usage base}
\]

Ensuring that a service center rate is composed of only allowable costs with no element of profit involves reviewing and understanding all cost components included in the budgeted costs. Ensuring that there is no subsidization requires a thorough review of the base to make sure that all users are included. Managing these risks is explored in more detail below.

Budgeted Costs. Let’s first concentrate on the numerator, budgeted costs. Service center rates are normally developed in advance of the center’s fiscal year and are therefore based upon estimates. As always, care needs to be taken to ensure that only allowable, allocable, and reasonable costs are included in the rate.

Service center costs typically include personnel costs (e.g., salary and benefit costs), materials and supplies, and, depending on university policy, the depreciation on nonsponsor-funded equipment. Allowable costs that are sometimes overlooked at the rate-development stage but should be included are equipment maintenance contracts and prior period under- or over-recoveries. Utility, maintenance, and building costs will not typically be included in the rate as these costs are normally recovered through the university’s facilities and administrative (F&A) rate (an exception exists for very large and/or specialized service centers).

One of the main challenges in managing equipment-intensive research centers is figuring out how to pay for the cost of equipment. Though the service center has to fund the total cost of an item of equipment in the year of purchase, the recovery of that cost is spread out among the years that benefit from the use of the equipment. Thus if an item of equipment costs $100,000 in Year 1 and the useful life for that item is estimated to be five years, then only one-fifth of the cost of the equipment ($20,000) may be included in the allowable costs to be recovered in the rate in each of the five years. Of course the service center still has to find a means to pay for that equipment in Year 1. This dilemma frequently results in service center management wanting to include an equipment reserve component in the costs. To the extent that this cost component represents the recovery of future costs it is unallowable. Federal sponsors will not pay now for a cost that may be incurred at some point in the future (because, for example, what if the technology changes or the research focus shifts resulting in those services no longer being required?).

While there is no perfect solution to this challenge of how to fund equipment, a few suggestions can be made:

◆ Would it be possible to enter into an operating lease for the equipment in which case the lease payments could be included as allowable costs?

◆ Is gift or internal funding available?
**Is there an opportunity to bring external users into the facility and charge them a higher price than internal users?**

The premium paid by external users could then be used to fund an equipment reserve. Of course external use should be incidental. Additionally, universities need to be aware that external usage can involve different types of compliance concerns, such as unrelated business income tax (UBIT), indemnification and liability issues, and potential program income (if the equipment used in the service center was federally funded) (For a discussion of UBIT and program income, see ¶2905.4 and ¶3305.14, respectively.)

**Budgeted Usage Base.** Let’s now turn to the denominator, the budgeted usage base. This is the volume of work expected to be performed expressed in reasonable units of measurement. The unit of measurement depends upon the nature of the facility. For example, an equipment-intensive facility could express costs in terms of machine hours; a labor-intensive activity in terms of labor hours, and a center that delivers a measurable product may use budgeted volume. The key is that there should be a strong relation between the chosen base and the natures of the costs being charged. In order to recover costs, it is important that the center uses realistic base estimates, i.e., the amount of time that a machine is likely to be used compared to the amount of time that it is available for use.

A center can make a business decision to offer discounted or free rates to some users. This should be categorized as an intentional subsidy and the cost of that subsidy must be borne by the center (or the university) rather than federal users. The following example will help illustrate this point:

**Example**

A machine shop makes its services available to support faculty research and also provides hands-on instructional experience for students. The shop manager estimates annual operating costs of $100,000 and 1,000 hours of machine usage, of which 80% will be supporting sponsored projects and 20% will be student usage. The shop wants to encourage student use and as such decides that they can use the facility free of charge. If the student usage was excluded from the base then, the center would recover all of its costs and the federal users would effectively be subsidizing the students, i.e., the rate would be calculated as $125/hour ($100,000/800 hours). Instead, the rate should be calculated as $100/hour ($100,000/1,000 hours) with the center (or university) funding the subsidy.
As noted above a service center’s rates generally are based upon estimated costs and estimated usage; it is unlikely that actual costs will be exactly as estimated, therefore the center will most likely generate an unintentional under- or over-recovery of costs in any given year. As long as the under- or over-recoveries is not significant (and not intentional) it is generally acceptable to liquidate it in a future year’s rate.
§1720.2 Reviewing Your Admin & Clerical Cost Policies: Help From the OIG
AIS Editors

A special form of cost misallocation is the direct charging to a federal project of costs that by their nature are indirect or facilities and administrative (F&A) costs (see ¶1705.4). For example, most costs of clerical staff are considered F&A costs and are charged to federal projects through application of the institution’s F&A rate. In some special situations, however, OMB Circular A-21 expressly permits direct charging of costs that are normally considered F&A costs (see Figure 1730.3-1).

Audits by the OIG

The concerns about specific compliance requirements that are addressed in Circular A-133 audits often are reinforced by audit work performed by federal offices of inspector general (OIGs) or by public accounting firms under contract to them. Typically, most OIG audits are post-award and take place after the conclusion of the contract or grant or other assistance agreement and before the end of the required record retention period (usually three years). In general, the subjects of post-award audits are the costs incurred, and the audits will be conducted either in person or via a desk audit. Documentation of expenses is closely looked at during these audits. (Like auditors performing the Circular A-133 audit, auditors from the OIG or independent auditors performing audits under contract to the OIG must follow the Government Auditing Standards (the Yellow Book).)

Identifying OIG Audit Targets

The OIG annual audit/work plans provide insight into the audit areas it plans to target for the fiscal year. These plans are issued usually in October. OIGs also summarize the results of high-profile audits in semiannual reports to Congress. These reports can provide indicators of the areas that are receiving greater scrutiny or that are causing compliance difficulties.

Another resource for identifying OIG audit targets is the audit of the agency’s grants management programs conducted by the OIG or the Government Accountability Office. Whatever weaknesses are exposed in the audit of the agency is likely to surface in an audit of the grantee as well. For example, if an agency is criticized for not ensuring timely delivery of reports, it is likely that during an audit of the institution, the auditor will review the filing dates of the required reports.

The Department of Health and Human Services (HHS) OIG has indicated in recent audit plans that it is targeting treatment of administrative and clerical support charges. To date, the OIG has issued three audit reports on the issue (see Figure 1730.3-1) and others are expected.

Therefore now may be a good time to review what the OIG has found and ways to ensure your own institution’s compliance with the requirements. Be sure to not
only look at your polices but also how they are being followed. The closeout process may be the perfect preparation for a post-award audit. This process is the final review of items such as direct charges of clerical and administrative costs before submission of the final financial report. Unallowable costs not previously detected should be removed at this time, and documentation not previously provided should be obtained for costs.

In its response to the OIG’s recent audit report of its administrative and clerical costs, Duke University cited a number of steps it took to fine-tune its policies and practices including the following:

- Establishment of a formal process for reviewing and approving direct-charged administrative costs at the proposal stage and again when the award is made
- A training tool-kit on the monthly reconciliation process, a key element of which looks at direct charges of administrative costs
- A “Post-Award Closeout Checklist” that identifies directly charged administrative costs at time of grant closeout if they have not already been identified in the monthly reconciliation process
- Development of a risk assessment process by the Research Costing Compliance Office that includes monitoring and reporting for risks related to this topic

**Documents Reviewed.** As a reminder, auditors often request the following documents for review to support administrative and clerical salaries charged to grants:

- Your cost accounting standards disclosure statement
- Your chart of accounts and related descriptions
- Policies and procedures on administrative and clerical costs and other costs normally charged as indirect costs
- Job descriptions and job titles for employees charged to the administrative and clerical account codes
- Grant application budgets, contract proposals, and related justifications for charging costs as direct that are normally charged as indirect

**Assessing Internal Controls.** The purpose of the audits is to check for allowability of administrative and clerical salary costs and other types of administrative and clerical costs that were charged directly to HHS grants. The university’s internal controls over administrative and clerical expenses are assessed as part of the review. For example, according to the OIG in one audit, the root cause of the unallowable charges revealed in the audit was the failure of the university’s internal controls over federally charged administrative and clerical costs. The university’s general accounting procedures cited Circular A-21, OIG said, but “the University had largely left it to the discretion of its individual colleges, departments, and principal investigators to interpret” the procedures. The report said the office of sponsored research “did not provide adequate scrutiny for charges proposed and subsequently charged by colleges, departments, and principal investigators (PIs). The University’s
policies essentially allowed direct charges to any project needing any administrative or clerical support.”

Projects Must Be ‘Major.’ Circular A-21 prohibits direct charging of clerical and administrative salaries except in the case of “major projects,” which are defined as projects that require an “extensive amount of administrative or clerical support, which is significantly greater than the routine level of such services provided by academic departments” and provides examples of such projects in Exhibit C to A-21 (see Figure 1730.3-1).

In one audit report, the OIG listed the examples in A-21 section F.6.b and Exhibit C of projects for which direct charges for administrative and clerical expenses may be appropriate, but said “… many of the projects [to which the university had direct charged] had little in common with the programs and activities listed in Exhibit C to the Circular as examples of what might actually be considered major projects.” The OIG cited the following: A PI stated that he considered clerical salaries specific to creating, copying, and assembling the annual progress report to be allowable. However, he provided no explanation why the production of an annual report, which is required of almost every sponsored award, might be interpreted as requiring an “extensive amount of administrative or clerical support.”
HHS OIG Audits to Date

◆ The HHS OIG audit of administrative and clerical costs at Duke University found that the university "claimed approximately $1.7 million in unallowable charges as direct costs to grants, contracts, and other agreements with HHS components during fiscal years 2003 and 2004." OIG also recommended that the university revise its policies to comply with Circular A-21 and "ensure consistent treatment of administrative and clerical costs." In its comments, the university maintained that the audit report did not fairly represent its policies and internal controls and that the university has complied with federal requirements. It pointed out that it had developed additional training programs and implemented additional monitoring procedures since the review. Duke also said that no OIG audits of universities had used statistical sampling to extrapolate reimbursement amounts since 2001 and found the extrapolation "inequitable."


◆ The OIG made no recommendations after conducting an audit of administrative and clerical costs claimed between July 2004 to July 2006 at the University of California, San Francisco. The audit concerned UC-SF's claimed costs of $635 million for 2,153 federal grants, contracts, and other agreements with NIH." The university made minor clerical errors in charging costs. However, university officials stated that the errors have been corrected," the audit stated.


◆ An audit of Brandeis University found that the university misclassified $31,303 of $393,881 charged to grants and contracts for clerical and administrative costs and other direct costs during fiscal years 2004 and 2005. Of the misclassified funds, $24,958 in other direct costs and $6,345 in related indirect costs were spent on books, subscriptions, and public relation costs, which "should have been included" in the university's facilities and administrative costs, OIG said. OIG recommended that Brandeis "update its procedures to include books, subscriptions, and other supplies as costs claimed under F&A costs unless adequately justified, budgeted, and approved by NIH as a direct grant cost and work with NIH to resolve the $31,303 in misclassified costs." Brandeis agreed with the findings and the recommendations.


Link to HHS OIG audit reports: http://oig.hhs.gov/oas/nih.asp.
Figure 1720.2-1: Overview of A-21 Requirements for Charging Direct Costs

Circular A-21 sets forth a few key requirements that apply to direct costs, and administrative costs must meet these requirements in order to be considered direct costs.

Specifically Identified Costs. Sec. D.1 of A-21 describes direct costs as “those costs that can be identified specifically with a particular sponsored project, an instructional activity, or any other institutional activity, or that can be directly assigned to such activities relatively easily with a high degree of accuracy.” It is usually not possible to identify administrative salary costs, or non-salary administrative costs such as office supplies, with a specific project “relatively easily with a high degree of accuracy” because typically such costs “are incurred for common or joint objectives” — the definition of indirect or F&A costs (sec. E.1). A-21 is clear, however, that “[i]dentification with the sponsored work rather than the nature of the goods and services involved is the determining factor in distinguishing direct from F&A costs of sponsored agreements” (Sec. D.2). This means that the fact that a particular cost is labeled “administrative” or “clerical” does not necessarily mean that it must be treated as an indirect cost.

Consistently Treated Costs. Sec. C.11.a of A-21 provides that “[a]ll costs incurred for the same purpose, in like circumstances, are either direct costs only or F&A costs only with respect to final cost objectives.” This requirement is reiterated in the circular’s discussion of direct costs (Sec. D.1 states, “Costs incurred for the same purpose in like circumstances must be treated consistently as either direct or F&A costs.”). This means that to the extent that administrative costs that are specifically identifiable with research are charged to sponsored research projects, administrative costs specifically identifiable with other functions (such as instruction) must in like circumstances be directly charged to those functions.

Salary Costs. Sec. F.6.b(2) of A-21 provides that “[t]he salaries of administrative and clerical staff should normally be treated as F&A costs.” The section goes on to say, however, that direct charging of such costs is allowable “where a major project or activity explicitly budgets for administrative or clerical services and individuals involved can be specifically identified with the project or activity.” Of course, the costs must also meet the specific identification and consistency standard.

Budget Requirement. A-21 states that in order to charge administrative or clerical salaries directly to a grant, the institution must have “explicitly budgeted for such costs. “

Technical Personnel. It is sometimes overlooked that Sec. F.6.b(2) of A-21 does not apply to staff who are performing a technical function, even if they might typically be classified as clerical personnel. It applies only to personnel who are providing “administrative or clerical services.” Neither the “major project” condition nor the budgeting provision of Sec. F.6.b(2) applies to personnel performing technical functions, such as database management or manuscript technical editing. Sec. F.6.b(1) recognizes that “salaries of technical staff, laboratory supplies (e.g., chemicals), telephone toll charges” and other items “shall be treated as direct cost[s] wherever identifiable to a particular cost objective.”

Non-Salary Admin Costs. Sec. F.6.b.3 of A-21 states that, “Items such as office supplies, postage, local telephone costs, and memberships shall normally be treated as F&A costs.” These administrative costs are “normally” treated as F&A costs because they typically represent the kinds of costs “that are incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored project, an instructional activity, or any other institutional activity” (Sec. E.1). There are some cases, however, where a non-salary administrative cost can be “identified readily and specifically with a particular sponsored project,” and in such cases, the cost may be charged directly. A-21 makes it clear that whether a particular cost can be “identified” with a particular sponsored project does not depend on the nature of the charge (e.g., administrative vs. technical): “Identification
with the sponsored work rather than the nature of the goods and services involved is the determining factor in distinguishing direct from F&A costs of sponsored agreements” (Sec. D.2).

‘Major Projects.’ Sec. F.6.b(2) of A-21 defines major project as “a project that requires an extensive amount of administrative or clerical support, which is significantly greater than the routine level of such services provided by academic departments.” Exhibit C to A-21 provides six examples of major projects “where direct charging of administrative or clerical staff salaries may be appropriate”:

1. Large, complex programs such as general clinical research centers, primate centers, program projects, environmental research centers, engineering research centers, and other grants and contracts that entail assembling and managing teams of investigators from a number of institutions.
2. Projects that involve extensive data accumulation, analysis and entry, surveying, tabulation, cataloging, searching literature, and reporting (such as epidemiological studies, clinical trials, and retrospective clinical records studies).
3. Projects that require making travel and meeting arrangements for large numbers of participants, such as conferences and seminars.
4. Projects whose principal focus is the preparation and production of manuals and large reports, books and monographs (excluding routine progress and technical reports).
5. Projects that are geographically inaccessible to normal departmental administrative services, such as research vessels, radio astronomy projects, and other research field sites that are remote from campus.
6. Individual projects requiring project-specific database management; individualized graphics or manuscript preparation; human or animal protocols; and multiple project-related investigator coordination and communications.

It’s worth noting that examples #2, #3, #4, and #6 relate to projects that may not involve inherently large or complex programs, but that nevertheless have specific requirements that make it necessary to use unusual amounts or types of administrative or clerical services.

Exhibit C makes it clear that the examples presented are not exhaustive. There can be other circumstances in which the “major project” designation would be appropriate.
1720.3 **Service Centers: Reinforcing Roles & Responsibilities to Achieve Compliance**

Martin Smith, Attain, LLC

As we begin a new year, many institutions are beginning the budget process to project how fiscal year 2012 (FY12) will finish and plan for fiscal year 2013 (FY13). The budget process typically includes budget analysis of the operating, sponsored programs, discretionary, and other funding sources. This annual process should also include a review of service centers in preparation for the upcoming cost analysis based on actual FY12 activity and rate setting for FY13.

Service Centers for another consecutive year have made the federal Department of Health and Human Services (DHHS) Office of Inspector General (OIG) FY12 Audit Work Plan. There is very little concrete guidance as to how to operate service centers making compliance requirements challenging to achieve.

There are many misconceptions about service centers, ranging from understanding the correct terminology, to applying the right compliance requirements, to knowing your institution’s position on defining what constitutes a service center. We will review 1) an overview of federal costing compliance requirements, and 2) discuss ideal roles and responsibilities of individuals responsible for oversight and management of service centers.

**What is a Service Center?**

For purposes of this article, a *Service Center* can be any business unit within an organization that charges other users for their services. The Office of Management and Budget (OMB) Circular A-21, Section J.47 introduces the term *Specialized Service Facilities* as meaning “highly complex or specialized facilities operated by the institution, such as computers, wind tunnels, and reactors.” OMB Circular A-21 also defines an alternative to specialized service facilities in Section F.6.b.(1) by the use of *Recharge Center*, interpreted to mean a non-specialized service facility such a copy center or glasswashing facility. Section F.6.b. of OMB Circular A-21 is also important to note because it has also been a focus topic on recent DHHS OIG audit work plans, particularly for the consistent treatment of direct-charging of departmental administrative costs. *Research Core Facilities* typically refer to a highly specialized service center providing a technical service such as genomics, imaging, or cell sorting facilities. Core facilities may also be subsidized by a National Institutes of Health (NIH) core

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1 This article is reprinted from the *NCURA Magazine*, Volume XLIV, No. 1, January / February 2012, published by the National Council of University Research Administrators. It is used with permission of the publisher.


2 OMB Circular A-21, Section J.47, can be found online at: http://www.whitehouse.gov/omb/circulars_a021_2004/

4 Archive of DHHS OIG Audit Work Plans, can be found online at: http://oig.hhs.gov/reports-and-publications/archives/workplan/index.asp
center grant and be advertised by your institution as a competitive strength or focus area of science. Lastly, there are Animal Research Facilities which may fall under one or more of the definitions above. Animal research facilities also follow a special ratesetting guide called: Cost Analysis and Rate Setting Manual for Animal Research Facilities.5

Compliance Requirements
Service Centers have compliance requirements from the federal government in OMB Circular A21, Section J.47 and within your own institution depending on how service centers are defined. Some institutions call all budget or business units that charge out for their services a service center, while others have a dollar threshold (e.g. $5,000 or $25,000) to determine whether a recharge function is a formal operation. Other institutions are only concerned with specialized service facilities that look at operations charging significant, material amounts to federal awards and/or have a revenue amount greater than a specified dollar amount (e.g. $1 million). Many institutions require approval from a central office such as the controller/comptroller, finance, or sponsored programs office to get approval to begin a service center operations. The specifics of your institution’s policy and procedures regarding service centers will dictate how you should proceed.

Here are selected compliance requirements paraphrased from OMB Circular A-21, Section J.47:
(1) Service centers are allowable as a direct-charge as long as you apply credits for portions of the operation the federal government supported;
(2) Charge for actual usage based on a schedule of rates;
(3) Do not discriminate against federally supported activities;
(4) Recover the aggregate costs of the services including direct and indirect costs;
(5) Adjust rates biennially and consider prior period surpluses or deficits;

Applying these compliance requirements and those of your institution, while also managing a service center as an internal business unit, will pose challenges to the many people involved in the process.

Roles and Responsibilities
A service center requires different functions ranging from advertising, order entry, order fulfillment, managing day-to-day operations, to invoicing, collection (if external accounts), performing an annual cost analysis to setting rates for the next fiscal year.

The types of information needed can range from questions about costs, volume, rates, the market, assumptions, and constraints. Typical questions include: how many orders have been delivered and ready to charge or invoice; what supplies are needed to deliver services; how many people will be working in the service center; which

5 The Cost Analysis and Rate Setting Manual for Animal Research Facilities is published by the NIH National Center for Research Resources (NCRR) and can be found online at: http://www.ncrr.nih.gov/publications/comparative_medicine/CARS.pdf
users make up a majority of the volume; what rates will the market pay; are there competing service centers using better technology; and did you document assumptions and consider constraints?

This information can come from different people involved in different aspects of a service center operation. Everyone involved in the process has important compliance and management functions that contribute to the successful operation of the service center. Below is a list of typical roles and responsibilities within an institution:

◆ Central Office—an institution typically has someone in the Finance or Sponsored Programs Office responsible for oversight of service centers. Duties include establishing accounts, setting policies, and establishing biennial review procedures to ensure compliance. Oftentimes the institution’s Cost Analysis/F&A person is responsible for providing federal costing interpretation.

◆ Central or Departmental Sponsored Programs Post-Award—this function ensures costs charged to sponsored awards match the time of the charges, appear reasonably based on the type of award, and follow institutional allowability requirements. They may also be the final approval before a service center charge (via journal entry or feeder system) is charged to a sponsored award.

◆ Internal Audit/Compliance Official—this function is responsible for monitoring the institution’s compliance requirements and efficacy of internal controls in relation to the transaction processing.

◆ School-level Finance, Administrative or Budget Office—may provide limited or expanded oversight depending on the centralization model employed by the institution. Ultimately this office would be concerned with ongoing surpluses or deficits.

◆ Department Administrator—could have a variety of functions to processing journal entries for service center charges, adjusting payroll allocations for service center staff, to mediating budget or rate-setting issues between the service center and oversight offices.

◆ Scientific Director—the scientific faculty member in charge of the service center, who determines the scope of services offered and advertises the center within the department, school, university, or larger market.

◆ Service Center Administrator—the financial and administrative manager of the service center responsible for ordering supplies and billing out for services rendered as well as rate setting. This role may be combined with a Lab Manager.

◆ Lab Manager—person managing the order fulfillment of the service center and managing the technicians performing the work in the service center. This is the person likely responsible for conveying to the financial administrator that the technical work has been completed or other billing milestones. This person has a very important role because without them, the administrators have no way of knowing (without a vendor-offered solution) that services have been rendered.
◆ Service Center Technical Staff—the individuals doing the technical work of the service center.

◆ Senior leadership—any senior role supporting the strategic direction of service centers, ranging from a dean, provost, controller, and others.

As this list demonstrates, there are numerous individuals in an institution responsible for service centers where there does not appear to be one person with complete responsibility. This separation of duties is good for internal controls; however, poses more challenging when compliance requirements and cost analysis requires input from all of them. Ultimate accountability is on the institution. Coordination and communication between them is essential for success. My experience at the University of Pennsylvania worked so well because we had support from senior leadership and cooperation throughout all of the roles and responsibilities outlined here. When underperforming services centers are faced with the equivalent of bankruptcy, it requires input from the scientific side to know whether the service centers were worth saving. Determining whether departmental recharge centers are compliant with OMB Circular A-21 requires justifications from the department administrator, guidance from the compliance office, and a final determination from the cost analysis official. Internal audit including service centers in its work plan is also beneficial in testing the efficacy of your institution’s service center policies and procedures.

**Conclusion**

My favorite motto is “working in a University, you cannot achieve anything by yourself.” Managing service centers is a difficult process because of the competing demands to achieve compliance, meet solvency requirements, and providing services to the users of the facility. Reinforcing roles and responsibilities is important to running a compliant, break-even, and solvent service center operation.

**About the Author**

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He has 10 years of research administration experience primarily in post-award and financial compliance having worked at institutions in the Philadelphia, PA and Washington, DC areas. Martin had service center responsibilities at the University of Pennsylvania School of Medicine and Temple University and is active with Attain clients on the subject.
1720.4 **Genesis and Implications of a Survey on Sharing F&A Cost Recovery**

Kristine M. Kulage, Columbia University School of Nursing

Do research administrators and senior investigators believe policies for sharing facilities and administrative (F&A) cost recovery on sponsored projects between schools, departments, or units would help promote interdisciplinary research initiatives? How many colleges, universities, and academic medical centers actually have such policies in place? What are the most common, effective, and satisfying types of policies? These are the questions that prompted an article I recently first-authored for *Academic Medicine*, “Sharing Facilities and Administrative Cost Recovery to Facilitate Interdisciplinary Research.” Our published findings, which present an emphatic “yes” to the first question and illustrate an important policy gap, in the end point readers to one last open-ended question: What now?

My history with this topic began in early 2004 when I was the grants administrator for one of the 21 exploratory interdisciplinary centers initially funded by the National Center for Research Resources of the National Institutes of Health (NIH) under the NIH Director’s Roadmap Initiative. After four difficult but rewarding years and a large learning curve, in 2008 I presented a case study on this topic at the 50th Annual NCURA Meeting where I discovered that I was not alone in facing the administrative difficulties inherent in interdisciplinary research. A year ago, I detailed my experiences working with this center in an *NCURA Magazine* article which highlights the challenges of setting up multiple financial accounts across departments that would allow for the sharing of F&A cost recovery at an institution where this was not standard practice and a policy did not exist. Fortunately, I was able to develop “backdoor” methods within our archaic accounting systems that allowed us to share this grant’s F&A cost recovery. This caught the attention of the Mailman School of Public Health’s Associate Dean for Interdisciplinary Programs who was struggling with the same issues and led to our eventual collaboration on the *Academic Medicine* original research article.

We began our investigation with several key questions: “What F&A cost recovery sharing policies currently exist?”; “Is there interest in this topic among colleges, universities, and / or medical centers?”; and “Is there a gap in the literature about this topic that we can fill?” As we searched online for general information about the topic, we noted that there was almost nothing in the published literature. In addition, an indepth search failed to reveal any peer-reviewed articles which described and examined, in a systematic way, policies for sharing F&A cost recovery or assessed user satisfaction with any existing policies.

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1 This article is reprinted from the *NCURA Magazine*, May / June 2011, Volume XLIII, No. 3. It is used with permission of the publisher.


I spent over 100 hours scouring the Internet for universities which currently have policies for sharing F&A cost recovery between schools, departments, or units posted on their web sites. The limited number of policies I found were buried deep within layers and sub layers of convoluted university web sites, and were found across a wide array of home page types (e.g., controller’s office, sponsored projects administration office, post-award office, general policy pages, etc.). A few were available through a single link to the findings of a previously convened task force where the actual policy was stated in one sentence on page 25 of 30 pages. Based on this, I imagine some of these policies are not well-publicized and or well-known even for administrators and researchers at that institution. After using almost 50 distinct search terms in Google searches and investigating any links which looked remotely like they would lead to a policy, I was only able to find 54 policies. Although the policy descriptions and types ranged from very generic and loose to exhaustingly specific percentages of F&A split, we were able to categorize them into 4 major types which then informed our survey that we targeted to both investigators and research administrators.

Our simple, brief survey was designed to capture information about attitudes toward policies for sharing F&A cost recovery, specifically in regard to their impact on interdisciplinary research. It also asked respondents if their institution has such a policy and, if so, what is the overall design of their policy and how satisfied are they with it.

The invitation to participate in the survey was sent to all principal investigators (PIs) of NIH-funded Clinical and Translational Science Awards (CTSA) as well as all members of four NCURA Neighborhood Listservs. The high response rate from the CTSA PIs was especially impressive considering the heavy workload these senior investigators typically have, which attests to their interest in the topic.

In all honesty, we were not surprised to find that the vast majority of respondents, administrators and researchers alike, agreed that a policy for sharing F&A cost recovery between participating schools, departments, or units would improve interdisciplinary research efforts. Logically, it makes sense that receiving a portion of the indirect costs associated with conducting the research would be a huge incentive to collaboration – money talks, and loudly in today’s economy. Even so, the majority of respondents reported that their institution does not have a formal policy in place.

There was a surprising lack of knowledge and awareness among both groups of respondents: over 8% indicated they didn’t know if their institution even has a policy for sharing F&A cost recovery. Considering the experience level of CTSA PIs and active NCURA members, we were surprised that nearly 1 out of 12 couldn’t answer this question. This could be a direct result of how difficult policies are to find on their web sites or that they are simply not publicized internally. Our most important survey finding was the fact that most individuals who indicated their institution had a policy also indicated that they were satisfied with the policy. Statistical analyses showed that, amazingly, this was true regardless of the type of policy they have. This speaks volumes in support of having policies, rules, and regulations in
this area rather than ambiguity or dealing with the issue on a case-by-case basis as it arises.

As a way of saying “thank you,” once our article was available in PubMed, I again contacted all members of the four NCURA listservs which had been invited to participate in the survey. In less than two hours I received 80 responses requesting a copy of the article and to date I have sent copies to over 200 NCURA members (the article will be freely available in PubMed Central, http://www.ncbi.nlm.nih.gov/pmc/, PMCID: PMC3045474, on 3/1/2012). Several respondents added that they are currently working with central administration on developing such a policy, a testament to the article’s timeliness. Very few institutions currently have policies, but recent NCURA responses indicate this trend is changing.

Obviously, interest in this topic remains high, and our Academic Medicine article has great potential to prompt research administrators to promote the adoption of a policy for sharing F&A cost recovery at their institution. Ultimately, it is my hope that the article will also empower them to begin negotiations with central and department administration to develop tasks forces to explore policy options for sharing F&A cost recovery best suited for their institution’s unique needs and dynamics. Since it has become clear that interdisciplinary research is not just a passing fad,4 it’s time for institutions to embrace the reality and set themselves up for success. Our research has shown that one positive step in this direction is to establish a policy that allows collaborating schools, departments, and units to share in the F&A cost recovery of sponsored projects.

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1720.5 Strategic Spending to Maximize F&A Return
Carolyn Elliott-Farino, Kennesaw State University

The theme of the magazine this month is Doing More With Less, the mantra of research administrators at most predominantly undergraduate institutions (PUIs). As a public PUI, Kennesaw State University (KSU) does not have the infrastructure or budget of fellow University System of Georgia (USG) institutions UGA (Georgia), Georgia Tech, or Georgia State, let alone private research institutions (and some elite PUIs). KSU was founded as a two-year college 50 years ago; and when it became a four-year university in the 1990s, the focus was still on teaching. Although KSU faculty had been quite successful in obtaining National Science Foundation (NSF) Course, Curriculum, and Laboratory Improvement (CCLI) grants, as well as Department of Education Teacher Quality grants, it was not until the mid-2000s that faculty started having success in receiving research grants from NSF and the National Institutes of Health (NIH). At about this same time, the University started to emphasize the importance of research, while still highly valuing teaching and service.

While research started to become a more important component of the promotion and tenure process, the University had limited resources for release time for faculty or start-up packages for new hires. KSU had always been a place where people did more with less. Whether it was the Board of Regents’ asking KSU to test drive new processes or assume some USG administrative duties with no additional resources, or faculty having to teach seven or eight courses per year and making time for grant proposal writing and intramural research, employees at the university consistently did more with less.

There is a downside to always doing more with less – you are expected to continue doing more and more with no additional resources. As you regularly increase your output, it becomes ever harder to convince those with the purse strings that you actually need more resources. On an individual level, think of the employee who regularly assumes additional tasks. Before long, her job duties have expanded exponentially, and she is starting to run out of steam. How does she tell her boss that she needs help, that she has too much work to do? “What do you mean you need help? You are doing an outstanding job. You get everything done well and on time.” This employee has done such a great job doing more with less that she has shot herself in the foot. She has effectively increased the list of her job duties with no commensurate increase in salary or promotion. Should she have spoken up sooner and declined some of these additional tasks?

For a university, what does it mean to do more with less regularly? On the face of it, one is to be commended for being efficient; but if that efficiency is not rewarded with more resources, is that a hollow commendation? How does it affect a university’s potential to increase its research portfolio when it is administratively efficient, when it does more with less?

One area that is potentially negatively affected is the facilities and administra-
Active (F&A) rate because the rate is calculated on the basis of the institution’s previous year’s expenditures. If the institution had low administrative expenditures in the prior year, this would be reflected in the F&A rate calculation. Since its federal awards do not meet the $10,000,000 threshold that would dictate use of the long form, KSU uses the short form to calculate its rate. The base is total direct costs (TDC) less capital equipment and subaward amounts in excess of $25,000. This is in contrast to the modified total direct costs (MTDC) described in A-21 that the long form yields. The short form TDC rate only excludes the capital equipment and subaward amounts.

The short form is less taxing to prepare (no space survey required) and considerably less expensive than the long form, which makes it more appropriate for PUIs. It is, however, not as precise as the long form and sometimes yields seemingly unjust results. This fact was brought home to us this spring as we finalized our F&A rate proposal—we were surprised and dismayed that the rate had decreased since the previous proposal. Research activity has increased; we have two beautiful new buildings partially devoted to research, so how could our rate have declined?

The simple answer is that the numbers in the denominator are increasing at a faster rate than are their counterparts in the numerator. (Note: The F&A rate is the ratio of indirect costs to direct costs.) The university has increased its expenditures on teaching, research, public service, and student services, and this is good since the university’s primary stakeholders are its students; Georgia taxpayers also have an interest since state resources partially fund the university’s budget. True to its history of doing more with less, KSU increased the number of students it served, increased its public service outreach, and increased its research activity with a minimal increase in administrative expenses. Well done, KSU!

Except . . . like that employee who regularly assumed additional tasks and ended up with a heavier workload but no salary increase or job promotion, has the university shot itself in the foot by being fiscally prudent and administratively efficient? One would hope not, but what is a conscientious PUI to do? It receives (and has always received) modest budget allotments from the state and is unable to increase tuition, and therefore has limited resources available for capital improvements, library expenses, staffing, or start-up packages. Funds are purposed first to meet the instructional needs of a large public undergraduate student population and growing number of graduate students, and secondarily to invest in the facilities and non-instructional personnel. The institution is caught in the proverbial catch 22—it needs to increase its spending on research in order to recoup higher F&A on sponsored research. With limited state resources and no ability to raise tuition, where does an institution find these additional resources to devote to the research enterprise?

While an institution can bemoan the lack of state resources and tuition, most institutions have some latitude in how they spend their funds. Should a PUI that is trying to increase its research activity and has prioritized it for new hires spend more strategically on its library and research facilities? Should it hire departmental staff to help with administrative tasks, thereby freeing up time for faculty that they
can use to conduct intramural research or prepare grant proposals? Should it invest in an electronic grants-management system that would streamline proposal submission and award management?

These are difficult decisions for any institution to make because most have competing interests all vying for the same limited resources. Public institutions in particular have a public service mission, so it is difficult to cut back on public service, even when no or limited F&A costs are provided. Such projects contribute to the denominator, but very little to the numerator. However, were the institution to decline these activities, it could run afoul of its governing body or state legislature. More importantly, institutions of higher education are not driven by the bottom line and don’t base decisions solely on economics. Decisions are made to support the mission.

Student learning is paramount, and while faculty who are engaged in research bring implicit benefits to their students, including opportunities to conduct research, the many interests competing for limited resources can all claim that they are critical for student learning. Global learning is just one area that demands resources and the costs to be a globally engaged institution are not insignificant. How should an institution prioritize its spending?

Research administrators don’t usually have the ability to dictate strategic spending at their institutions, but sponsored programs personnel can raise the issue with senior level administrators and make them aware that how the institution chooses to spend its money can have a profound impact on its ability to increase its research activity. Improving the institution’s research resources will facilitate faculty research, increase faculty competitiveness, and strengthen proposals in the area of institutional environment and resources. Moreover, increased spending on research indirect costs will eventually yield a higher F&A rate, which will allow the institution to continue to devote more resources to research.

Lest one get carried away with the thought of a ballooning F&A rate, the idea is not to increase administrative spending just to spend more money and be less efficient. Rather, because F&A rates are currently determined by documented expenditures (presuming the Office of Management and Budget does not adopt a flat F&A rate for all institutions), if an institution with a relatively low F&A rate but aspirations of increasing research opportunities for its faculty and students wants to maximize its resources for this pursuit, the institution needs to make a strategic investment that considers F&A return.

About the Author

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1720.6 Optimizing Reimbursement: Understanding the UCA
Tony Benigno, Monika Moses, Attain, LLC

The Operations and Maintenance (O&M) cost pool is the largest uncapped cost pool included in the Facilities and Administrative (F&A) cost rate. Utilities (electricity, steam, natural gas, fuel oil and domestic water) are a major component, and often the largest expense, of the O&M cost pool. That’s why understanding the Utility Cost Adjustment (UCA) and its implications are as important as ever when it comes to optimizing your O&M reimbursement and overall F&A recovery.

Uniform Guidance Establishes New UCA Calculation
With the implementation of OMB Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards 2 CFR Part 200, or Uniform Guidance (UG), all Institutions of Higher Education (IHE) are now eligible to receive the UCA rate. While the UG does not change the methodology used to allocate O&M costs—utilities included—to Organized Research (OR), the UG now requires all IHE’s on the long form to calculate and justify the UCA up to a cap of 1.3 points.

Reaction to the new calculation of the UCA rate in the UG is varied. The Council on Government Relations (COGR) indicated in their response to OMB-2015-0001, that the section in the UG related to calculating the UCA “…may be the single most confusing section of Uniform Guidance…”. So let’s clear things up. First, it’s important to understand where the UCA came from and why it’s used at all. Then we’ll examine the calculation and show you how it’s applied through two example cases.

The Past — From UCAS to UCA

Starting in the 1980’s colleges and universities performed Utility Cost Allocation Studies (UCAS) that distributed utility costs on a room by room basis using the results of energy audits. The Utility Cost Adjustment (UCA) was then introduced in 1998 under OMB Circular A-21 to replace the complex UCAS. The UCAS served as the basis for 65 universities included in OMB Circular A-21 Exhibit B to earn the eligibility to claim a flat 1.3 additional points in their F&A cost rate proposal; the 1.3 was added to their calculated F&A rate.

But why have a UCA at all? Within a building there are many different room types, including research labs and office spaces. A typical research lab requires 100% outside air and has four or more times the number of air changes per hour compared to an office. And, since a large percentage of energy goes in to conditioning air, you start to see that there are very large differences in energy density within a building – and that is only one of many variables. The UCA is, in simplest terms, a means of addressing such energy differences without conducting detailed, room level energy audits.

Thus, with the disallowance of the UCAS in OMB Circular A-21, it became more important to identify opportunities to improve the allocation of cost by using exist-

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1 This article is reprinted from the NCURA Magazine, Vol XLVIII No 4, August 2016. It is used with permission of the publisher.
ing utility meters, and to further optimize cost recovery with additional strategically placed meters. Building level utility meters became the tool to identify and allocate utility costs to a building.

**Calculating UCA — What Is The REUI?**

In a multifunction space where metering can’t isolate utility cost to a single function (which is most common) the UCA justification begins with the calculation of an “effective square footage”. All research laboratory space is multiplied by a Research Energy Use Index (REUI). The REUI established in the UG is 2.0, and the regulations stipulate that the REUI will be adjusted not less often than every five years, nor more frequently than every year.

The REUI weighting factor defined in the UG 2 CFR Appendix III, section B.4.c (2) (ii) B was calculated as follows:

**Figure 1720.6-1**

The average energy usage of buildings with Laboratories – taken from the Lawrence Berkeley Laboratory (LBL) benchmarking tool (http://labs21benchmarking.lbl.gov)


\[
\text{REUI Numerator: } \frac{310 \text{ kBtu/yr}}{155.37 \text{ kBtu/GF} \text{ yr}} = 2.0
\]

Effective square footage is calculated by multiplying the actual research laboratory space by the REUI; utility costs are then reallocated in the same manner, but with the new proportion of areas. The overall result is more utility costs allocated to Organizational Research (OR) within the F&A rate calculation. The difference between the F&A rate calculation with the weighting factor applied and without it (all else being equal) reflects the percentage increase in the F&A rate, or the UCA. The UCA is currently capped at 1.3%.

**Optimizing Utility Cost Allocation**

Since the Uniform Guidance went into effect, we’ve repeatedly heard two very important questions from two predominant groups of institutions. The first group represents institutions eligible for the UCA for the first time asking, “Any UCA is a windfall compared to before so I am done, right?” Whereas the second group is comprised of institutions that previously received the UCA of 1.3 points asking, “How do I maintain my UCA of 1.3 points?”

As consultants and engineers by trade, we have worked closely with the allocation of utility costs since the 1990’s, and we welcome the renewed interest in all things utility related. Keeping in mind that every IHE has its own unique blend of
challenges related to the extent and types of utility metering, space assignment, and service agreements, we present two case studies that emphasize the implementation of the new UCA calculation— for institutions applying the UCA for the first time and those trying to maintain their 1.3 points—and the overall importance of utility metering and cost identification.

**Case Study No. 1 — I Finally Get the UCA, I’ve Calculated It, So Now I Am Done**

IHE No. 1 was not previously eligible for the UCA. The IHE allocated all of the O&M costs equitably at the same cost density across the entire campus. Being new to the UCA, and uncertain as to the calculation, Attain was engaged to calculate the UCA (Column C) and identify utility costs to OR (Line 1 Column A). The IHE was delighted that the UCA was calculated at 1.65 points, though disappointed to learn that there would have to be an adjustment down to the 1.3 point cap. The net result was $832,000 identified to OR using the campus wide allocation, which was based on a claim there were no meters.

Because we speak “Facilities,” we were skeptical about the claims of no building meters. Not surprisingly, there were meters, but they were only being used to track energy usage for operational purposes (internal benchmarking, energy conservation tracking, etc.) rather than to track energy cost by building. So, we rolled up our sleeves, jumped into a few steam tunnels, and closely examined the distribution systems and meter data. A revised cost allocation and UCA calculation was then developed that incorporated the metered data (Line 2).

Although using the metered data resulted in a lower UCA and net loss of $29,000 (Line 3 E) related to the UCA, the combined impact was substantially offset by the gain from using the metered data to allocate utility costs to OR. This resulted in a total of $1.26M identified to OR, which represented a $426,000, or 2.1 point increase (Line 3 F) above the default methodology that the IHE was previously using.

**Figure 1720.6-2. Case Study 1: Did Not Receive UCA Prior to UG**

<table>
<thead>
<tr>
<th>Reference Line</th>
<th>Allocation Bases</th>
<th>Allocation to OR of Utility (and Related) Cost</th>
<th>UCA Impact on $ to OR</th>
<th>Total $ to OR (points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 1</td>
<td>Default - Campus Wide</td>
<td>Allocate based on Sq. Ft. of Assignable Area</td>
<td>$565,000</td>
<td>$902,000</td>
</tr>
<tr>
<td>Line 2</td>
<td>Recommended Allocation based on Meters</td>
<td>$1,020,000</td>
<td>$1,258,000</td>
<td>1.16</td>
</tr>
<tr>
<td>Line 3</td>
<td>Impact (Line 2 - 1)</td>
<td>$455,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Case Study No. 2 -- We Used to Get 1.3 UCA Points. How Do We Maintain It?

IHE No. 2 was one of the 65 schools permitted to add the UCA of 1.3 percentage points under OMB A-21. The default allocation (Line 1) included some metered data, and the UCA was calculated at 0.84 points, with a cost to OR of $2.2M (Line 1 F). Pulling all of the meter data out of the allocation and resorting to a uniform cost density similar to Case Study No. 1 did result in meeting the 1.3 UCA rate, but it provided the worst combined cost to OR (Line 2 F) of $1.9M. After an analysis of the IHE’s utility distribution systems, it was determined that additional building level meters would improve the overall identification of utility costs to OR (Line 3 A). Similar to Case Study No. 1, the UCA did decrease further, but the overall cost identified to OR increased an additional $351,000, or almost a point a year (Line 3 F). The added metering cost met with the institution’s requirement of a simple payback of approximately one year.

Figure 1720.6-3. Formerly Received UCA of 1.3 Under OMB A-21

Comparison of Allocation Models with the UCA (MTDC = $50 mil)

<table>
<thead>
<tr>
<th>Reference Line</th>
<th>Allocation Bases</th>
<th>Allocation to OR of Utility (Related) Cost</th>
<th>UCA Impact on Cost to OR</th>
<th>Total $ to OR (POINTS)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(A) Allocate based on Sq. Ft. of Assignable Area</td>
<td>(B) Allocation to OR applying REUI 2.0</td>
<td>(C) UCA Calculated (B-A) MTDC</td>
</tr>
<tr>
<td>1</td>
<td>Default - Some meters</td>
<td>$1,783,000</td>
<td>$2,226,000</td>
<td>0.84</td>
</tr>
<tr>
<td>2</td>
<td>Maximize UCA - no metering</td>
<td>$1,198,000</td>
<td>$2,464,000</td>
<td>2.39</td>
</tr>
<tr>
<td>3</td>
<td>Recommended Allocation using Enhanced Meters</td>
<td>$2,192,000</td>
<td>$2,577,000</td>
<td>0.73</td>
</tr>
<tr>
<td>4</td>
<td>Impact (Line 3 - 1)</td>
<td>$409,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Conclusions

It should be understood that each institution is unique, and there is not a one size fits all approach to improve the identification and recovery of utility costs to Organized Research. The calculation of the UCA presents some challenges in and of itself, and the focus should be to understand the interaction of the UCA and an institution’s allocation of utility costs. The objective should be to maximize the recovery of utility costs from the cumulative results of the prescribed allocation methodology plus the additive UCA.

When it comes to allocation methodology, utility metering is an equally important component of the evaluation because the cost of utilities (as well as costs
Improving Cost Allocation and Recovery

There are a number of metrics that can be defensibly increased significantly over the years to track and manage utilized to improve cost allocation and subsequent recovery through the F&A cost rate. For the typical multifunction building, utility costs should be apportioned to function in the same manner as depreciation: identified at the building level (or for groups of buildings), and then allocated by functional activity within the building(s) based on the assignable square footage. Meters are used to track utility consumption to a building or group of buildings. Although the number of buildings that are individually metered have energy costs and to identify opportunities to reduce energy and water waste, it is not uncommon to find additional opportunities, through additional metering or corrective action, to increase F&A recovery.

While improving cost allocation through use of metered data can improve overall cost recovery, it’s important to understand that it doesn’t always lead to the highest UCA rate. Understanding the interaction between the cost allocation methodology and UCA calculation is key.

that are related to utilities such as mechanical maintenance) normally comprise the largest component of the O&M cost pool. Therefore, it is critically important to understand the institution’s utility metering and distribution systems.

Some of the issues that should be examined might include:

◆ How are utility costs allocated to buildings?
◆ How are the utility related costs (i.e. operator costs, equipment maintenance and repair costs) tracked and assigned to utilities?
◆ How are line losses tracked and assigned to utilities?
◆ What initiatives (new buildings, new plants, or other modifications) are underway that will impact the allocation of costs?
◆ Is metered data defensible?

The appropriate use of existing meters, or developing a plan to implement additional meters where necessary, should be a focus of all institutions. It should be noted that building meters themselves are expensive to install and maintain properly, and so locations that provide meaningful payback should be modeled and selected carefully – do not just put meters everywhere. Finally, always remember that although the use of building level meters may reduce the UCA, the gain by using (and possibly adding) meters will likely far outweigh the benefit of a UCA, even one at the cap of 1.3 percentage points.

About the Authors

Tony Benigno is a Manager with Attain, LLC’s Higher Education Facilities and Administration Services Practice. Tony has more than 20 years of experience in the HVAC industry, ranging from routine assessments and troubleshooting of existing...
meters and collection and reporting systems, to Project Management, Commissioning, and M&V related to the identification and recovery of utility and utility related costs including, but not limited to, F&A rate proposals.

**Monika Moses, PE** is a Manager with Attain, LLC’s Higher Education Facilities and Administration Services Practice. Monika has more than 20 years of engineering experience, including energy benchmarking, energy utilization studies, conceptual design and implementation of metering programs, costing studies for cogeneration systems, and identification of strategies to improve the allocation of costs in the Operation and Maintenance cost pool.
1730  Practical Tools
This section includes practical guidance and tools — flowcharts, checklists, etc. — relating to facilities and administrative (F&A) costs. These materials are culled from a variety of authoritative sources.

1730.1 ‘Best Practices’ Manuals
AIS editors

The Department of Health and Human Services (HHS) Division of Cost Allocation (DCA) released a new version (dated December 2006) of its “Best Practices Manual for Reviewing Long-Form University Facilities and Administrative Cost Proposals” in early 2007. The 149-page manual replaces a 2001 edition and provides guidance to federal negotiators to use when negotiating F&A rates with colleges and universities and reviewing indirect cost rate proposals. Because research administrators may be involved in preparing successful F&A rate proposals, the manual could prove useful also to research administrators.

There are four new sections included in the 2006 edition:
◆ alternate space methodology
◆ affiliated hospital space including Department of Veterans Affairs facilities
◆ Intergovernmental Personnel Act mobility program rates
◆ facility cost projections


Guidance From EPA

The Environmental Protection Agency (EPA) has issued guidance to its grants management and program officers on steps to be taken in performing a cost review of a grant proposal budget. The guidance provides detailed information by cost category on considerations in conducting cost reviews. EPA’s “Cost Review Guidance” is available at http://epa.gov/ogd/grants/award/CostReview.htm.
\subsection{1730.2 Reviewing the Importance of F&A Cost Recovery}

\textbf{AIS editors}

Indirect costs of research — laboratories, utilities, research materials, and administrative and regulatory compliance costs — are real costs that are reflected in the facilities and administrative cost reimbursement rates that are regularly negotiated and audited by the federal government. To limit arbitrarily the ability of universities to recover these costs would impose an undue financial burden on universities, discouraging them from continuing to conduct the research vital to the nation’s future security.\footnote{From the Council on Governmental Relations, working in conjunction with the Association of American Universities and the National Association of State Universities and Land Grant Colleges, “Statement Expressing Opposition to Indirect Cost Cap on Basic Research In House Defense Appropriations Bill,” August 2007. Available at www.cogr.edu.}

In August 2007 the Council on Governmental Relations, working in conjunction with the Association of American Universities and the National Association of State Universities and Land Grant Colleges, created a set of documents to help explain facilities and administrative (F&A) costs and “the serious negative impact” a then-possible Department of Defense F&A cost cap would have on the research enterprise. At that time, appropriations legislation passed by the House would have placed a 20 percent cap on DoD basic research costs. (A cap of 35\% on indirect costs was included in Public Law No. 110-116, signed in November 2007 and effective for fiscal year 2008.)

The following documents were posted to the COGR Web site (www.cogr.edu) and may prove useful to research administrators as a review and background on the importance to the research enterprise of F&A cost reimbursement:

\begin{itemize}
\item Advocacy Talking Points on the Proposed 20\% Cap on Defense Basic Research
\item Background Talking Points on Indirect Costs of Research
\item Costs of Research - A Primer
\item Costs of Research – Facts and Figures
\item Costs of Research – A Case Study
\item Summary of COGR F&A Rate Survey, 2007
\end{itemize}
### 1730.3 Determination of Allowable Costs: Critical for Sponsored Projects Success

Jean Cody, The University of Texas at San Antonio

Whether monitoring is done at the department level or in central administration and whether it is done prior to expenditure or after the fact, OMB Circular A-21 needs to be considered. OMB Circular A-21 (2 CFR 220), Cost Principles for Educational Institutions, establishes principles for direct and indirect costs that may be charged to federal research grants and contracts. Most of us are, or should be, familiar with A-21’s criteria for determining allowable costs, direct or indirect. As addressed in C.2., allowable costs must:

- Be reasonable — Reasonable is the prudent person rule. Is the cost necessary?
- Be allocable — Allocable asks if the cost is solely to advance the work under the sponsored agreement and benefits the agreement and the institution.
- Be given consistent treatment — Consistent treatment refers to “like circumstances.”
- Conform to limitations or exclusions of A-21 or the sponsored agreement.

Sounds pretty simple, right? So how do we do this, as a department, central administration or finance department? One of the most important ways to address allowability of costs is written policies and procedures that deal with their interpretation of A-21. Here are some suggestions for what to keep in mind when writing or updating your allowable cost/direct charging policies and procedures and implementing them. Of course these ideas are not all inclusive or exclusive. As part of the process you need to determine what works best for your institution.

Determine who is responsible for monitoring expenditures for allowability. Do you have good departmental support? Do they have the resources? Is the central administration staff in a position to monitor all or some expenditures? Do they have access to what they need in the institution’s purchasing, payroll, disbursements and accounting systems?

- Do you have an after-the-fact financial review at the time of invoicing/financial reporting? Does staff have adequate access to documents?

If you have a negotiated indirect cost rate agreement, meet with staff responsible for the institution’s indirect cost rate proposal.

- Make sure you agree on what are “like circumstances” and “major projects.”

- Determine how you will handle items normally considered indirect costs, such as office supplies and postage.

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1 This article is reprinted from the NCURA Magazine, Vol. XLII, No. 1, January-February 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
Communicate with faculty and staff prior to writing policies, and especially procedures.

◆ Talk with your principal investigators, program directors, and institute/center directors about their needs when working on projects.

◆ Find out what staff needs are to process paperwork and monitor as accurately as possible.

◆ Get feedback on draft policies and procedures from all persons and departments involved.

Application of policies and procedures.

◆ Once policies and procedures are approved, communicate the information and provide training at all levels: principal investigators, project directors, central sponsored projects administrators, departmental research administrators, administrative assistants, financial departments and any other department involved with sponsored project administration.

◆ When monitoring, consider the sponsor’s guidelines and regulations.

◆ Make sure everyone knows if allowability is affected by exceptional circumstances. What are those circumstances?

   Determination of allowable costs can be a complex issue. Just remember to keep in mind the needs of your institution and how you monitor expenditures for allowability. Taking the time to put workable policies and procedures in place — policies and procedures that were written with input from the whole institution — should streamline the monitoring process. It should also improve relationships with faculty, staff and other institutional departments, something that benefits all of us.

About the Author

Jean Cody is the Assistant Director, Post Award, in the Office of Sponsored Programs at The University of Texas as San Antonio. She is a graduate of Texas Christian University and has been at UTSA since August 2008. Prior to working at UTSA, Jean held various post award positions in research administration at institutions including the University of North Texas and Tulsa University. She also worked as the Grants Coordinator for the City of Stillwater, Oklahoma, where she identified and wrote grants in addition to post award administration.
§1730.4  A Primer on F&A and Research Operating Costs

Council on Governmental Relations

Research sponsors, including the federal government, private industry, state and local governments, and nonprofit foundations, provide funding to universities in the form of grants, cooperative agreements, or contracts. Awards generally include funds for the direct costs of research as well as F&A (i.e., “Research Operating Costs”), both of which are real costs incurred by the institution to conduct research. We use the terms “F&A”, “Indirect”, and “Research Operating Costs” interchangeably as a means to reinforce that F&A costs are an absolute necessity for a functional and effective research enterprise.

Direct Costs
Direct research costs are what people generally think of when it comes to federal support of research projects. These costs solely support research that is about to take place and often include laboratory supplies, specific research equipment, salary support for researchers and lab personnel, and travel for conducting research or disseminating research results. This is the core of university research, and it is also where the bulk of the federal investment is spent.

Facilities and Administrative (Research Operating) Costs
In order to perform research on behalf of federal agencies, universities incur a variety of other significant costs both leading up to and during a specific research project that they would otherwise not incur. F&A costs cover the portion of these infrastructure and operational costs related to federally-funded research. Such shared costs include the maintenance of sophisticated, high-tech labs specifically designed for cutting-edge, federally-sponsored research; utilities such as light and heat; telecommunications; hazardous waste disposal; and the infrastructure necessary to comply with various federal, state, and local rules and regulations.¹

Federal policymakers, and the investigators who conduct research projects, generally recognize the necessity of the direct costs of research, including salary support (e.g., investigators, laboratory staff, technicians, graduate students), supplies, and sophisticated equipment. F&A costs, on the other hand, are often devalued for primarily two reasons: (1) due to the way some agencies provide for F&A, some stakeholders view the F&A budget category as diverting funding from direct costs, and (2) the reimbursement mechanism for F&A costs (i.e., the “F&A rate”) is complex and thus difficult to explain and to understand.

However, fair reimbursement of F&A costs is crucial to a stable and viable re-

¹ From the Association of American Universities (AAU) and the Association of Public and Land- grant Universities (APLU). “Understanding the Costs of Federally Sponsored Research at Universities,” October 2013.
Research universities and institutions cannot implement research programs if sponsors do not support the real costs of research infrastructure and compliance activities. Construction and maintenance of state-of-the-art research laboratories and administrative efforts that ensure compliance with federal rules and regulations are necessary investments. A June 2014 COGR paper, *Finances of Research Universities* (see www.cogr.edu, Policy Issues / Financial Management), provides an in-depth look at the financial landscape of research universities, including the importance of the F&A reimbursement process.

The F&A rate is the mechanism used to determine and accomplish F&A cost reimbursement. The Office of Management and Budget (OMB), through 2 CFR Part 200 (Uniform Guidance) and related guidance, defines rules for reimbursement of F&A costs by way of federally-negotiated F&A rates. F&A rates are:

- **Calculated** by the university according to rules defined by OMB and based on audited university financial data;
- **Submitted** to the rate-setting cognizant agency (for research universities and most research institutions, either the Department of Health and Human Services, Cost Allocation Services or the Department of Defense, Office of Naval Research);
- **Reviewed and/or audited**, rigorously, by the rate-setting cognizant agency;
- **Negotiated** between the university and the rate-setting cognizant agency and normally effective for a period of two to five years; and
- **Charged** by multiplying the negotiated F&A rate by a subset of the direct costs of the sponsored research project.

An institution determines F&A costs by applying the negotiated F&A rate to a subset of the direct costs of the research project – this subset is known as the “modified total direct costs”, or MTDC. Through 2 CFR Part 200, OMB specifies those items that are included in MTDC and those that are not included to ensure equitable allocation of F&A costs. The items excluded from MTDC are generally direct costs which are assumed to not require extensive F&A costs/activities (e.g., graduate student tuition, equipment, subaward amounts greater than $25,000) compared to other direct costs (e.g., salaries, benefits, supplies).

The chart below illustrates typical direct cost items in a research budget and application of the F&A rate. The F&A Amount (column 4) is determined by multiplying the negotiated F&A Rate (column 3) by the Direct Amount (column 2) for MTDC cost categories.

**Figure 1730.4-1. Research Budget and Application of F&A**

<table>
<thead>
<tr>
<th>Cost Item</th>
<th>Direct Amount</th>
<th>F&amp;A Rate</th>
<th>F&amp;A Amount</th>
<th>Total Reimbursed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries and Benefits (MTDC)</td>
<td>200,000</td>
<td>54%</td>
<td>108,000</td>
<td>308,000</td>
</tr>
<tr>
<td>Supplies (MTDC)</td>
<td>30,000</td>
<td>54%</td>
<td>16,200</td>
<td>46,200</td>
</tr>
<tr>
<td>Grad Student Tuition</td>
<td>25,000</td>
<td>n/a</td>
<td>0</td>
<td>25,000</td>
</tr>
<tr>
<td>Equipment</td>
<td>75,000</td>
<td>n/a</td>
<td>0</td>
<td>75,000</td>
</tr>
<tr>
<td>Cost Item</td>
<td>Direct Amount</td>
<td>F&amp;A Rate</td>
<td>F&amp;A Amount</td>
<td>Total Reimbursed</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>----------</td>
<td>------------</td>
<td>------------------</td>
</tr>
<tr>
<td>TOTAL</td>
<td>330,000</td>
<td>124,200</td>
<td>454,200</td>
<td></td>
</tr>
<tr>
<td>(Percent of Total Reimbursed)</td>
<td>72.7%</td>
<td>27.3%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

The “Percent of Total Reimbursed” is of particular interest: The 54% F&A rate applied in the example results in F&A costs of 27.3% of the total research budget. National Institutes of Health data shows that F&A costs as a percent of total awards has remained constant for over a decade (see CHART 2 below).

**Figure 1730.4-2. NIH Direct and F&A Awarded (Dollars and Percent)**

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Direct Awarded (000s)</th>
<th>F&amp;A Awarded (000s)</th>
<th>Total Awarded (000s)</th>
<th>Direct as a Percent of Total</th>
<th>F&amp;A as a Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2002</td>
<td>12,822,068</td>
<td>4,835,456</td>
<td>17,657,524</td>
<td>72.6</td>
<td>27.4</td>
</tr>
<tr>
<td>FY2007</td>
<td>15,387,745</td>
<td>5,876,060</td>
<td>21,263,805</td>
<td>72.4</td>
<td>27.6</td>
</tr>
<tr>
<td>FY2012</td>
<td>15,978,032</td>
<td>6,182,900</td>
<td>22,160,932</td>
<td>72.1</td>
<td>27.9</td>
</tr>
<tr>
<td>FY2016</td>
<td>16,899,936</td>
<td>6,407,203</td>
<td>23,307,139</td>
<td>72.5</td>
<td>27.5</td>
</tr>
</tbody>
</table>

Source: Congressional Justification of the NIH fiscal year (FY) 2017 budget request; Overview of 2017 President’s Budget.

National Institutes of Health data shows that F&A costs as a percent of total awards has remained constant at less than 28 percent for over a decade. This may or may not represent the “ideal” ratio; however, it does demonstrate that a consistent allocation of funds dedicated to the direct costs of scientific activities is reliable.

At the same time, cutting-edge science requires appropriate infrastructure and other support and institutions incur these real research expenses in the form of facility operations and compliance activities when conducting research on behalf of the federal government and other sponsors. Equitable reimbursement of those F&A costs has a significant impact on the financial health of research institutions, and, consequently, helps to ensure that research activities are supported with the best, state-of-the-art laboratory facilities, as well as the highest quality administrative and compliance support mechanisms.
1760 Statistics and Survey Results

This section includes statistics and survey results and trends data relating to facilities and administrative (F&A) costs. These materials are culled from a variety of authoritative sources.

1760.1 Trends in NIH Cost Reimbursements to Universities

AIS editors

The General Accountability Office (GAO) released a recent report it submitted to Congress on “National Institutes of Health Extramural Research Grants: Oversight of Cost Reimbursement to Universities.” The report analyzed the management and oversight of direct and indirect costs in National Institutes of Health (NIH) grants awarded to universities for fiscal years 2003–2005, and the conclusions drawn in the report may be of interest to research administrators.

GAO found that reimbursement of indirect costs was stable at about 28.5 percent annually, because indirect cost rates were stable during this period. According to GAO, this was true because there was little change in the largest component of the indirect cost rate — the administrative component — and because indirect cost rates generally remain valid for 2 to 4 years once they are negotiated.” However, while the proportion of indirect costs awarded was flat, because the total amount of extramural research funding at NIH increased during the period, the amount NIH awarded to universities for direct and indirect costs associated with the grants also increased (see Figure 1760.1-1).

Figure 1760.1-1: Reimbursement of Direct and Indirect Costs to Universities Receiving NIH Extramural Research Grants, FYs 2003–2005

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Indirect Costs</th>
<th>Direct Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>$3.9 billion</td>
<td>$9.9 billion</td>
</tr>
<tr>
<td>2004</td>
<td>$4.2 billion</td>
<td>$10.5 billion</td>
</tr>
<tr>
<td>2005</td>
<td>$4.3 billion</td>
<td>$10.9 billion</td>
</tr>
</tbody>
</table>

GAO stated that the “key controls” in place to ensure grantee compliance with federal guidance in claiming costs include the review of information submitted by universities when indirect cost rates are set (see ¶1705) and when grant applications and annual progress reports are submitted. Key controls can also include conducting onsite reviews and examining cost accounting practice disclosure statements. (Each university that receives $25 million or more in federal funds during the previous fiscal year is required to prepare a disclosure statement detailing the cost accounting practices used to develop its proposal.) In carrying out these functions, the Department of Health and Human Services (HHS) Division of Cost Allocation (DCA) focuses much of its effort on universities receiving the most federal funding. (For more about DCA, see ¶1730.1.)

GAO also found that for the 100 universities that received the most NIH funding for FYs 2003–2005 and for which DCA negotiates indirect costs rates, average indirect costs were stable over the three-year period. “For each of these 3 years, indirect costs rates averaged about 51 percent of the modified total direct costs associated with the NIH grants.” Further, the average annual amount of the administrative component of the indirect costs rates, which is capped at 26 percent of modified total direct costs, ranged from 25.6 percent in FY 03 to 25.8 percent in FY 05.

To obtain a copy of the report (GAO-07-294R), go to www.gao.gov/new.items/d07294r.pdf.
¶1790  Knowledge Check
AIS editors

The Q&As at ¶1790.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 1700 has been understood. Note: For the answer key for ¶1790.1, see ¶1790.3, which appears on a separate page (page 1790:5) for testing purposes.

Discussion topics at ¶1790.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶1790.1  Q&As
1. Cost pools are
   (a) Costs associated with buildings and improvements used directly for, or in support of, sponsored research
   (b) Subcategories of facilities and administrative costs
   (c) Costs for offices that provide institutionwide general and administrative support services, school or college administration, department administration, and sponsored programs services
   (d) Costs incurred to support the institution’s mission activities that cannot be readily identifiable or directly assigned to a major project or activity with a high degree of accuracy

2. An F&A rate of 60% (MTDC) for sponsored research means that for every dollar of direct costs the institution spends on its research projects, it spends an average of WHAT on F&A costs?
   (a) $0.60
   (b) 6%
   (c) $6.00
   (d) $0.66

3. Under-recovery is
   (a) The rate calculated based on historical costs — the most recently completed fiscal year, which is known as the base year
   (b) The theoretical level of reimbursement that the institution would receive by applying the negotiated rate to all sponsored projects
   (c) The difference between the recoverable F&A costs and actual F&A recovery
   (d) An approximation of the costs that an institution incurs in support of its major programs
4. Sources of cost sharing could include all of the following EXCEPT:
   (a) Cash
   (b) Audits
   (c) Graduate student tuition
   (d) Materials & supplies

5. Nonfederal sponsors
   (a) Are not bound by the federal rules on F&A rates
   (b) Are bound by the federal rules on F&A rates
   (c) Unlikely to allow F&A rates
   (d) Categorically require F&A rate determinations based on MTDC

6. What amount of a subcontract is subject to F&A?
   (a) The first $50,000
   (b) The last $50,000
   (c) The first $25,000
   (d) The first $100,000

7. All of the following costs on federal awards generally are not subject to F&A
   EXCEPT:
   (a) Equipment purchase
   (b) Salary for a research technician
   (c) Tuition remission
   (d) Subcontract costs over $25,000

8. To be eligible as cost sharing, contributed costs must be all of the following
   EXCEPT:
   (a) Allowable
   (b) Reasonable
   (c) Necessary for the performance of the project
   (d) Approximately 50% of total project costs

9. According to ¶1705, what is RCM?
   (a) Regional consortium of researchers
(b) Resource certification by management
(c) Researchers care more
(d) Responsibility center management

\section*{Discussion Topics}

1. What is the difference between modified total direct costs and total direct costs and why is this difference important?
2. What is a “cognizant” federal agency for purposes of F&A costs? Why is this important?
3. What is the “F&A rate calculation” and why is it important to your institution?
4. How important to your institution is “recovery” of F&A costs and what is your policy with respect to use and distribution of F&A recoveries?
5. How are costs handled that would normally be indirect costs but under certain circumstances could be an “exception”? For example, postage costs on a survey project where the postage could be in the thousands of dollars and are integral to the project.
6. What is your institution’s policy with respect to indirect cost waivers? How often is this policy reviewed for possible revision?
7. Does your indirect costs rate differ between federal and nonfederal sponsored projects?
8. How do you obtain benchmarking data on how F&A costs are treated at institutions of comparable size to yours? How reliable is this data?
9. What is a “cost pool”? How do costs pools function at your institution?
10. What impact could cost sharing have on your F&A rate? Why?
1790.3  **Answer Key**

Following are the correct answers to the questions included at ¶1790.1.

1. (b) Subcategories of facilities and administrative costs

2. (a) $0.60

3. (c) The difference between the recoverable F&A costs and actual F&A recovery

4. (b) Audits

5. (a) Are not bound by the federal rules on F&A rates

6. (c) The first $25,000

7. (b) Salary for a research technician

8. (d) Approximately 50% of total project costs

9. (d) Responsibility center management
PLACE TAB

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Chapter 1900
Data Rights and Intellectual Property

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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter covers the closely related topics of data rights and intellectual property, including patents, copyrights, and software, of concern to research administrators.

Mary Ellen Sheridan, now retired from the University of Chicago, provides an exceptionally thorough overview of the topics. Sheridan effectively makes the point that it all starts with data and the rights to that data. She demonstrates that without data there can be no intellectual property. Therefore, the manner in which “data” is defined and the way the rights to that data are assigned to the parties in a research agreement are of critical importance to the future uses to which the data can be put. Whether new to research administration or not, readers will find extensive information on data rights and intellectual property issues that facilitates an improved understanding of highly complex and occasionally arcane issues.

Sheridan describes the revolution in technology transfer and intellectual property that began with the passage of the Bayh-Dole Act in 1980. Since that time, universities and other grantees have had the right to elect to retain title to inventions developed with federal funds. In an area that was highly complex to begin with, Sheridan illustrates some of the factors that continue to make it even more complex, including the application of export control regulations and the increasing use of “proprietary” and “confidential” data. Sheridan wisely points out the benefits of an effective collaboration between the institution’s research administrators, technology transfer staff, and legal counsel.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶1905, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at ¶1920), practical tools (at ¶1930), case studies (at ¶1940), and trends data and other related statistics (at ¶1960). A “knowledge check” containing Q&As and discussion topics is included at ¶1990.
Data Rights and Intellectual Property

Mary Ellen Sheridan*
Associate Vice President for Research (retired)
University of Chicago

Offices of sponsored programs (OSP) are responsible for assuring that the terms and conditions of awards reflect, protect, and uphold the mission and values of the institution. Research administrators may not always understand the scientific objectives and methodologies (the “guts” of research proposals), but they must know how to assure that any terms and conditions governing a proposal and/or resulting award protect the rights to data generated by investigators and researchers during the course of the sponsored project, protect the use of that data after the award period ends for education and further research purposes, and assure that the rights to intellectual property created during the course of the sponsored project are clearly understood by all parties. Data and intellectual property (IP) concerns must be identified by research administrators and principal investigators (PIs) at the proposal stage.

Open and respectful communications between the sponsored programs office, the technology transfer office (TTO), and the general counsel/legal office assures that faculty and research administrators receive the necessary assistance in a timely and informed manner. Data rights and intellectual property requirements are complex, inconsistent from sponsor to sponsor, and highly dependent on the nature of the agreement. Mentoring systems and cross training between sponsored programs offices and technology transfer offices in these areas is highly recommended.

This chapter describes the concepts of data rights and intellectual property sufficient to evaluate proposed “terms and conditions” for consistency with institutional policy and compliance with federal regulations (and other sponsors’ terms and conditions) and provides advice about what generally acceptable terms and conditions should include to protect investigators and the institution. This chapter also provides OSP personnel an opportunity to become familiar with the federal government’s rights in data, technical data, and intellectual property.

The chapter also advises when the prudent sponsored research administrator should seek the counsel and expert advice of technology transfer and legal offices, as these resources are often critical when confronted with complex data rights and IP provisions. Discussions of data and intellectual property rights on campus must appreciate that rights to data and IP are also important to the federal government or any other sponsor, and an overview of such rights also is included in this chapter.

* The author would like to acknowledge the assistance of Susan Boone, Deputy Director, University Research Administration, and Russell Herron, Associate General Counsel, at the University of Chicago for their assistance in reviewing a draft of this chapter.
¶1905.1 Overview of Data Rights

The definition of what constitutes data may depend on what stage of research is being discussed and includes the following:

◆ **Primary data**: original observations and findings in any format, usually not interpretable without additional information; examples of primary data include “raw” data, notebooks, Western blots, spectral scans, radiologic images, primary video recordings, photographs, clinical records, cell lines, and laboratory strains

◆ **Secondary data**: primary data transformed to make understandable to scientific peers, statistically analyzed data, summary data, charts, and photographic montages

◆ **Published data**: final interpretation and presentation of data

Three important definitions of data from federal requirements are referenced on page 1905:3. However, federal data rules and regulations vary from agency to agency, and within the same agency the appropriate management, retention of rights, and use of data may differ depending upon whether the award is a grant or a contract. In the case of nonfederal sponsors, especially private sector sponsors, it is paramount that data rights be clearly defined in the agreement. It is also very important to make sure that the definition and treatment of “data” does not include forms of intellectual property developed in the course of research. Data are not inherently intellectual property. The two subjects should be treated separately.

More than any other federal agency, the Department of Health and Human Services (HHS)/National Institutes of Health (NIH) has issued guidance and policy pertinent to its expectations of a grantee institution’s and principal investigator’s responsibilities with respect to data generated in the conduct of NIH-funded research (see ¶1905.3). In the following discussions, frequent references to NIH data sharing, data retention, and data accessibility policies and guidelines reflect NIH’s continuing and increasing concerns about the rights and obligations of data management. In general other federal agencies may have similar expectations of researchers, but few have such well-articulated policies and guidelines. Thus it is not unusual that institutional policies refer to NIH’s expectations in their own policies and guidance to investigators.

**Investigator Priorities**

For researchers the dissemination of the research outcomes is of primary importance. The right to disclose and publish research findings is a fundamental tenant of academic freedom. The right to control access to research data, the right to establish productive research relationships and collaborations with various sponsors, and the training and education of students are inextricably intertwined with data rights.

**Data for Research and Educational Purposes**

Any sponsored research agreement should contain a clear understanding that the university has reserved the right to use data generated in the course of the research or sponsored project for continuing research and educational purposes. This is important for clinical study agreements in which the sponsoring company often asserts a right of ownership of the data generated in the course of the study. If the institution is unable to
secure joint ownership or limit sponsor rights to the delivered case report forms, it is important to protect the right to use the data for education and research purposes. Protection of the right to use research data goes hand in glove with publication rights.

Key Terms

The following are key terms relating to data and intellectual property rights.

Background intellectual property: This is intellectual property developed before or independent of performance of the particular agreement that is generally legally necessary for performance of the award work.

Bayh-Dole Act: The act provides universities, nonprofit organizations, and small businesses the right to elect to retain title to the inventions created in whole or in part with federal support. Regulations issued under the act are codified at 37 CFR 401. Federal agencies are required to reference 37 CFR 401 in most grants, contracts, and cooperative agreements with universities, nonprofits, and small businesses.\(^1\)

Data: (1) OMB Circular A-110 defines data as “the recorded factual material commonly accepted in the scientific community as necessary to validate research findings, but not any of the following: preliminary analysis, drafts of scientific papers, plans for future research, peer reviews, or communications with colleagues.” A-110 excludes from the definition physical objects (lab samples); trade secrets, commercial information, and materials necessary to be held confidential; and personnel and medical information and similar information.\(^2\)

(2) The NIH Grants Policy Statement (December 2003), “Part II: Terms and Conditions of NIH Grant Awards,” Subpart A: General Access to Research Data defines data as “recorded information regardless of the form or medium on which it is recorded, and includes writings, film, sound recordings, pictorial reproductions, drawings, designs, or other graphic representations; procedures, manuals, forms, diagrams, flow charts, equipment descriptions, data files, data processing or computer programs (software), statistical records, and other research data.”\(^3\)

(3) FAR 27-401 and 52.227-14(a) of the Federal Acquisition Regulations (the FAR) define data as “recorded information, regardless of form or the media on which it may be recorded” (“FAR Data”).\(^4\)

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\(^1\) The Bayh-Dole Act was passed in 1980 as P.L. 96-517 and amended in 1984 by P.L. 98-620. Regulations issued under the act are codified at 37 CFR 401. Title 37 covers “Patents, Trademarks, and Copyrights” and Part 401 pertains to “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms under Government Grants, Contracts and Cooperative Agreements.” The Department of Commerce is responsible for maintaining the regulations.

\(^2\) OMB Circular A-110 is entitled Uniform Administrative Requirements for Grants and Cooperative Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Institutions. A-110 was revised in 1999 and is now codified at 2 CFR 215. The OMB circulars can be found at www.whitehouse.gov/omb/circulars.


\(^4\) The FAR Web site is www.acqnet.gov/far.
**Fundamental research exclusion/exemption**: Export control regulations have the potential to undermine academic freedom. This possibility has been acknowledged and provided for in National Security Decision Directive (NSDD) 189, which exempts fundamental research from export control. The directive defines "fundamental research" as "basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production, and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons."

**Intellectual property (IP)**: This term generally refers to creations of the intellect that have commercial value and are protectable under the law, including inventions, processes, literary and artistic works, and the like. Although each type of IP is a separate area of law, governed by different federal, state, and common laws concerning ownership and protection, all these mechanisms are designed to provide some protection from someone misappropriating the products and ownership of intellectual creativity. Common forms of IP include patents, copyrights, trademarks, and trade secrets.

**License**: A license is a legal agreement or contract that permits one party to use intellectual property belonging to another under mutually agreed upon terms. In other words, a license is a grant of a right to use IP.

**Material transfer agreement (MTA)**: An MTA is a form of protection for intellectual property that governs the transfer of material and related information from one entity to another. These agreements set forth the terms of use and obligations of the recipient when exchanging materials. Typically these materials are cell lines, DNA, or chemical compounds. However, MTAs may be used for the transfer of any kind of physical material.

**Patent**: A patent is a document granted by the federal government in accordance with 35 USC 154 that provides the recipient of the patent the right to exclude others from making, using, or selling his or her invention throughout the United States. 6

**Royalty**: A royalty is consideration or compensation paid to the licensor in exchange for certain rights in technology that the licensor is providing to the licensee. (Royalties may be based on many factors — e.g., sales, up-front fees, performance benchmarks.) Licenses also may be royalty free, meaning that they make no provision for royalties.

**Work for hire**: This refers to a copyrighted work prepared by an employee within the scope of his or her employment or a copyrighted work specially ordered or commissioned that falls into one of nine categories in the Copyright Act (contribution to a collective work; part of a movie or other audiovisual work; a translation; a supplementary work; a compilation; an instructional text; a test; answer material for a test; or an atlas).

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6 35 USC 154, "Contents and Term of Patent; Provisional Rights." The code can be found at www.law.cornell.edu/uscode/.
§1905.3 Institutional Concerns over Data Rights

The concepts of data ownership, retention, access, and sharing are often intertwined under the general category of data “rights and responsibilities” or “obligations.” For some public institutions, state law may govern or dictate data policies. More frequently institutional policies and practices and sponsor terms and conditions contain more explicit requirements or guidelines governing treatment of research data.

A clear and unambiguous delineation of data rights and obligations in sponsored agreements is fundamental for institutions and investigators. Without clarity surrounding ownership of data or at a minimum the right to use the data generated in the course of the research, the right to public dissemination of research outcomes may be impeded and rights to intellectual property arising from the sponsored research may be compromised. It is impossible to talk about intellectual property without first talking about data rights.

Institutional Policies

Policies governing data rights and responsibilities take many forms. Some institutions have formal written data ownership policies; other institutions’ policies are more informal, perhaps only spelling out data retention obligations for researchers. For those institutions unfortunately lacking both formal or informal written policies and guidance, data ownership and retention default to rather more intuitive practices. That is, it is just good common sense for PIs to retain their original or raw data, consent forms, notebooks, recordings, etc., for as long as possible.

Institutions and PIs are well advised to develop a reliable and organized data/document management system. Written policies or guidance documents that describe the institution’s expectations and minimal data retention requirements for PIs are invaluable. In the absence of written guidance, well-intentioned researchers may assume they have minimal or no responsibilities for data management. Institutions may assume their PIs are keeping all source data safely and sharing appropriately. The sponsored programs offices may find lack of clear and unambiguous communication leads to unintended consequences and poor sponsor relations. Written institutional policies governing data ownership, retention, and sharing also provide a responsible framework for faculty as they mentor students and postdoctoral researchers.

Generally a university should own data resulting from university-conducted research. This assures that investigators

◆ retain the right to interpret data,
◆ control the content of presentations,
◆ can permit students to use data for dissertations,
◆ can use data for ongoing research activities, and
◆ preserve rights to use their data for other educational and research purposes.

Figure 1 contains four sample institutional data ownership/data retention policies.
Data Ownership

Ownership of research data often determines the future use of the data created during the project, unless use rights have been separately negotiated. Institutional ownership of data protects the researcher’s ability to publish. Ownership of the data assures that IP arising from the research can be further developed for commercialization through means of “technology transfer.” The institution is generally deemed to own data generated under federal assistance agreements.

The NIH Grants Policy Statement states that “grantees own the data generated by or resulting from a grant-supported project.” Contractual agreements from federal sponsors as well as other sponsors should be carefully examined prior to execution to assure that data ownership reflects the PI’s and institution’s interests.

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Footnote 3: See footnote 3.
Data Retention

Data retention generally refers not only to the means by which data are stored but also the explanation of who is responsible for retaining data. PIs typically retain their research data to support publications and to share data with collaborators and colleagues. In general institutions charge the PI with the overall responsibility to retain raw data generated in the course of the research in a manner appropriate to the discipline. There are other important regulatory reasons why original/raw data must be protected. With some exceptions, Office of Management and Budget (OMB) Circular A-110, Section 53 generally requires that “financial records, supporting documents, statistical records and all other records shall be retained for a period of three years” from the date of submission of the final expenditures report. Thus some tracking system is recommended to locate, identify, or document records destruction.

Institutions are also required to retain data that may be subject to a data access Freedom of Information Act (FOIA) request. Under OMB A-110, Section 36, a grantee institution must provide source data that was produced with federal funds and that are cited publicly and officially by a federal agency in support of an action that has the force and effect of law, i.e., has been used by the government in making policy or regulation.8

Digital Data Storage. Section 53 of OMB A-110 states: “Copies of original records may be substituted for the original records authorized by the federal awarding agency.” The HHS Office of Grants and Acquisition Management authorized the use of electronic-imaged records as substitutes for paper records in 1999.9 The institution is responsible for putting procedures in place to provide adequate security for digital records and a process to validate the authenticity of the electronic records.

Data Involving Misconduct Allegations. Timely mechanisms to obtain and protect original raw data are a critical component of an institution’s “research misconduct” policy. Many institutions have developed policies that define how the data in question will be sequestered and protected during the inquiry and investigation. As noted in its model policy and guidance documents, the Public Health Service (PHS) expects that the documentation supporting treatment of the allegation will address sequestration of data.

The obligation to assure access to data in the event of an allegation of scientific misconduct is a reason why an institution must assure that in any sponsored research agreement it has the ability to retain a copy of the research data. In conjunction with the regulations, institutional policies should be designed to protect both institutions and responsible researchers in the event of an allegation of scientific misconduct. Further the PHS “Policies on Research Misconduct” require that an investigation’s report and

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8 This A-110 language originated in the FY1999 Omnibus Appropriations Act (P.L. 105-277, Div. A, Sec. 101(h)), commonly referred to as the Data Access Law or Shelby Amendment, recognizing the source of the language as Sen. Richard Shelby (R-Ala.).

9 See www.hhs.gov/grantsnet/gps/at.htm. The policy was issued Aug. 9, 1999.
all records used to support the report must be maintained in a secure manner by the institution for seven years after completion of the proceeding or the completion of any PHS proceeding involving the research misconduct allegation.10

Data Sharing

Increasingly NIH requests for applications (RFAs) and requests for proposals (RFPs) either require or encourage a statement pertaining to the sharing of research resources or to intellectual property. NIH looks for specific plans for sharing data, materials, and software generated with NIH funds. Such resources should be freely available to the entire research community, consistent with the terms of the Bayh-Dole Act. The NIH policy statement on this subject, entitled “Principles and Guidelines for Recipients of NIH Research Grants and Contracts on Obtaining and Disseminating Biomedical Research Resources,” notes “data should be made as widely and freely available as possible while safeguarding the privacy of participants, and protecting confidential and proprietary data.”11 NIH wants to ensure that research tools and resources developed with NIH funds are readily available to the research community.

A statement on data sharing is required by NIH of applicants seeking $500,000 or more in direct costs in any year of the project period (see “Final NIH Statement on Sharing Research Data”).12 Data sharing is particularly important in those NIH-funded programs where databases are being developed or libraries of methodologies, sequences, single nucleotide polymorphisms (SNPs), etc., are a funding objective. Investigators should describe clearly and directly how data will be shared, e.g., through open-source code, posting of data to an open Web site, and publications/presentations to the research community. Reasonable time delays for protection of rights are permissible under Bayh-Dole and should be mentioned, if appropriate.

In accordance with the “NIH Policy on Sharing of Model Organisms for Biomedical Research,” investigators who develop such model organisms (animal or biologics) must include a sharing policy or explain why the research tools cannot be shared. A sample model statement is included in Figure 2 that can be used in applications to demonstrate an institution’s commitment to the open dissemination of research tools.13

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10 42 CFR Parts 50 and 93. See also Office of Research Integrity at HHS, www.ori.dhhs.gov.


Figure 2: Example of Institutional NIH Data Sharing/IP Plan

At the University of Chicago, the following guidance and sample language is posted on the “Resources” section of the University Research Administration’s Web site for investigators preparing proposals (http://researchadmin.uchicago.edu):

The following sample texts are provided to assist you with the preparation of grant applications. Should the sponsor require a Data Sharing/Intellectual Property Plan or a Plan for Sharing of Model Organisms/Animal Models, you may adapt this language to suit the specific needs and circumstance of your proposal.

Your proposal may be adversely affected if you do not document that you understand and agree to abide by applicable NIH and University of Chicago policies and procedures. To assist you in fulfilling your obligations as a recipient of federal funding and as a member of the faculty, we have prepared some sample language that you should adapt to reflect the types of research tools involved or that you expect to be created if your application is funded. Your signature on the proposal confirms to NIH that you understand and accept these important responsibilities.

Sample Language:

The University of Chicago is committed to the open and timely dissemination of research outcomes. Investigators in the proposed activity recognize that promising new methods, technologies, strategies, and computer software [revise as applicable to the nature of the research program] may arise during the course of the research. The investigators are aware of and agree to abide by the principles for sharing research resources as described by NIH in “Principles and Guidelines for Recipients of NIH Research Grants and Contracts on Obtaining and Disseminating Biomedical Research Resources.”

While the investigators expect that research tools will be freely shared with the research community, opportunities for technology transfer through commercialization will be explored as appropriate. Working with the university community, the University of Chicago’s Office of Technology and Intellectual Property (UCTech) manages intellectual property at the University of Chicago. UCTech serves faculty, staff, and students by commercializing inventions, ideas, and software developed at the university to ensure that new knowledge benefits society.

UCTech works with researchers to assess the commercial potential of new ideas. UCTech’s goals are to disseminate new ideas so the public can benefit from discoveries and to generate revenues for research and education. When the best means of disseminating discoveries and new intellectual property is collaboration between the university and commercial entities, UCTech has a special role to play. It protects the rights of the inventors and the university — and then typically works with industry, granting licenses so that a company will develop the discovery and bring it to the market. Revenues from licenses secured by UCTech are shared with the inventor, the inventor’s laboratory, and the inventor’s academic division. Where opportunities arise for corporate sponsored research related to the NIH-funded research programs, the university expects any agreements to conform to the principles described by NIH in the 1994 policy “Developing Sponsored Research Agreements: Consideration for Recipients of NIH Research Grants and Contracts.”

Sample Language for Sharing of Model Organism (Animals or Biologics):

Under the NIH “Policy on Sharing of Model Organisms for Biomedical Research,” published May 7, 2004 (NOT-OD-04-042), investigators who develop such model organisms (animal or biologics) must include a model organism sharing plan or explain why the research tools cannot be shared. A
Sample “Model Organism Sharing Plan” follows that can be used in applications to demonstrate the university’s commitment to the open dissemination of research tools. We also recommend you look at the FAQs and examples of plans NIH has developed to assist investigators at http://grants.nih.gov/grants/policy/model_organism/index.htm.

Note that grant applicants responding to a Request for Applications (RFA) or a Request for Proposals (RFP) may find additional requirements to those listed below, related to resource or data sharing for the specific announcement or solicitation. It is the responsibility of the investigator to address any such additional requirements in the “Sharing Plan.”

Sample Model Organism Sharing Plan

I. UNIVERSITY STATEMENT

The University of Chicago is committed to the open dissemination of research results, information and research tools that facilitate research and further scientific progress. It is the expectation and goal of the University that all “model organisms” (as defined by the NIH at www.nih.gov/science/models/) that are created during the course of NIH funded research grant projects, are shared with the research community. In accordance with these efforts the University of Chicago will use as guidance the NIH Policy on Sharing of Model Organisms for Biomedical Research, published May 7, 2004.

II. GUIDING PRINCIPLES

The guiding principles that the University will follow to achieve the above stated goal are outlined below:

1. The University will work with and encourage its faculty to disclose newly created model organisms on a timely basis.

2. The University will facilitate the transfer of model organisms to researchers requesting access through its material transfer agreements or the UBMTA Implementing Letter. Alternatively, the University may, when appropriate, make the material available through the use of a repository or a commercial distributor. In all cases, arrangements will be made to ensure that the materials are made widely available to the nonprofit research community.

3. If the University decides to patent the model organism, it will take steps to ensure that the protection of rights shall not interfere with the distribution of the organism to the scientific community.

4. If the University decides to patent and license the model organism, it will negotiate terms with licensees that promote widespread distribution of the organism. With respect to exclusive licenses, the agreements will include provisions for the return of rights to the University should the licensor fail to commercialize the technology and offer it for public sale in a timely manner. The University will also make every effort to reserve rights to the licensed material to the University and other nonprofit institutions.

5. The University will draw upon the expertise within University Research Administration, UCTech, the office of General Counsel and other appropriate offices within the institution when developing individual model organism sharing plans with its principal investigators.

6. If third-party patents or contract obligations exist, the University will seek to minimize any possible restrictions affecting the availability of model organisms.
III. MODEL ORGANISM SHARING PLAN SPECIFICATIONS
(to be completed prior to submission)

A. HOW THE NOVEL STRAINS WILL BE MADE AVAILABLE TO THE SCIENTIFIC COMMUNITY

1. Describe the organism(s) to be made available:

2. Indicate the form in which the organism will be provided (e.g., adults, embryos, sperm):

3. List any related research resources or data that you plan to provide:

4. Include a time frame for the periodic disposition of material and associated data:
   (materials should be made available at least upon publication of the primary results
   announcing the development of any genetically modified organisms)

5. Will a repository be used? ___ yes ____ no
   (Note: Examples of available resources are posted on the NIH Model Organism for
   Biomedical Research Web site and are updated periodically)

6. If relevant, describe how risks of infection or contamination will be minimized:

B. HOW TECHNOLOGY TRANSFER ISSUES WILL BE HANDLED

The University will facilitate the transfer of model organisms to researchers requesting access
through its material transfer agreements or the UBMTA Implementing Letter. Alternatively, the
University may, when appropriate, make the material available through the use of a repository or a
commercial distributor. In all cases, arrangements will be made to ensure that the materials are
made widely available to the nonprofit research community.

If the University decides to patent the model organism, it will take steps to ensure that the
protection of rights shall not interfere with the distribution of the organism to the scientific
community.

If third-party patents or contract obligations exist, the University will seek to minimize any possible
restrictions affecting the availability of model organisms.

__________________________________ ______________________________
Principal Investigator Date Institutional Officer Date
**Data Rights and Publication Rights**

Data rights and publication rights are closely aligned in most sponsored research agreements. The important messages reflecting this interrelationship can be summarized as follows:

- Free, unrestricted right of researchers to publicly share research results must be preserved.
- Determination of authorship and acknowledgements — whose intellectual or scientific contribution merits recognition as co-author versus acknowledgement as resource person — must be made clear.
- Compromising publication autonomy lends an appearance of the control of research by third parties and may jeopardize the fundamental research exclusion and raise export control issues. (Researchers and their institutions generally hold that a basic tenet of academic freedom is unfettered freedom to disclose research outcomes. A publication restriction by a sponsor (a “third party”), usually framed in language such as “review and approval” of proposed publications or presentations is thus a breach of academic freedom.)

**1905.4 Data Rights in Federal Awards**

Federal policies and regulations governing data rights are complex, inconsistent, and difficult to understand. Different policies apply to assistance agreements and procurements, and different federal agencies may have different regulations and policies. The recommended practice, therefore, is that research administrators should read each program solicitation, funding opportunity, RFA, broad agency announcement (BAA), RFP, or call for proposal to identify how data rights are defined and what obligations the government is requiring of the awardee.

It is incumbent on the institution to identify at the time the proposal is submitted whether data rights or any other terms of award are problematic and would require further negotiation if an award were to be considered. Even when the negotiation process concludes with modifications of award conditions that are acceptable to the institution, experienced administrators know to read again in detail the terms of the final proposed agreement prior to execution by the institution to confirm that all modifications agreed to during the negotiation have been incorporated into the final document.

Although there is no flow-down requirement for data rights, prime grantees and contractors typically seek a license from subawardees to use the data generated by the subawardee to fulfill requirements of the grant or contract. (For a full discussion of managing subawards, see Chapter 3700.)

**Federal Grants and Cooperative Agreements**

The government’s rights in data under assistance agreements (grants and cooperative agreements) are spelled out in OMB Circular A-110. The circular stipulates the federal government has the right to obtain, reproduce, publish, or otherwise use the data first produced under an award, and the government has the right to authorize others to
As noted above, in response to a FOIA request for research data relating to published research findings produced under a federally funded award and used by the federal government in developing an agency action that has the force and effect of law, the federal awarding agency will request, and the recipient should provide within a reasonable time, the research data so that it can be made available to the public through the procedures established by FOIA.

**Example**

Suppose the president were to issue an executive order (EO) banning cigarette advertising, and the EO cites research data in support of its position. If federally funded research grants developed that data, the source data must be turned over to the federal government to allow it to respond to a FOIA request. Note that the government agency not the institution responds to the FOIA request. A private institution is not subject to FOIA, even though some of its research work is “FOIA-able” through the sponsoring government agency. Public institutions may be liable under a state’s FOIA or so-called “sunshine act” (relating to transparency in government) to turn over or share information.

**Federal Contracts**

In federal contracts, ownership of data is determined by the terms of the contract agreement. Rights in technical data and computer software are prescribed within the Federal Acquisition Regulation (the FAR). There is no consistent treatment of data rights, however, under agency-specific FAR provisions. The government’s rights vary depending on the agency, the scope of work, or source of funds. Normally the government receives a royalty-free, nonexclusive, irrevocable, worldwide license to use, disclose, reproduce, prepare derivative works, distribute copies to the public, and perform and display publicly the copyrighted data for data “first produced.”

Certain FAR clauses (as discussed in Figure 3) are objectionable to most academic institutions because they infringe on rights to data created by the institution in the conduct of the research, limit or restrict the Bayh-Dole rights to the intellectual property arising from the research, or involve publication restrictions. Objections to FAR clauses are most persuasively argued by universities when the institution’s academic freedom and data/IP policies are clearly stated and uniformly applied. Ultimately institutions determine which FAR clauses they can live with in the interests of performing the research and which clauses infringe institutional principles to such an extent that it is preferable to turn down the proposed award. Knowing that an institution can and will decline the award can be a powerful negotiating tool, but the institution must be prepared to honor its claim.

OSP staff should read the FAR clauses pertaining to data rights carefully to assure that the rights of the institution and researcher are fully protected or, when appropriate, to assure that a detailed examination informs any determination of whether an exception to university policy may be warranted for the specific contract. There are several
frequently used FAR clauses that deal with technical data; some of these are described in detail in Figure 3 because they are of special relevance for university OSP staff. (For a full discussion of administering research contracts, see Chapter 2700.)

**Figure 3: Some FAR Clauses of Relevance to University Sponsored Research Agreements**

**FAR 52.227-14, Alternate IV**

For most agencies other than the U.S. Department of Defense (DoD), U.S. Department of Energy (DOE), and the National Aeronautics and Space Administration (NASA), FAR 52.227-14 applies. There are several alternatives offered under this FAR clause. Alternate IV is required to be used in contracts for basic or applied research to be performed solely by universities and colleges. Alternate IV states that title to all data and software belongs to the institution. If government and third-party funding is used, the government usually receives government purpose rights. For data, Alternate IV enables the government to reproduce, prepare derivative works, distribute copies to the public, and perform publicly and display publicly, by or on behalf of the government. For software, under Alternate IV the government does not receive the right to distribute copies to the public.

Research administrators should carefully review the full text of FAR 52.227-14(d)(3). This clause contains publication restrictions.

**FAR 52.227-17, Rights in Data – Special Works**

This clause is required to be inserted in contracts primarily intended for the production/compilation of data for government internal use or where there is a need for limited distribution. The government acquires unlimited rights to data, including technical data and computer software. The contractor may not establish copyright or release distribution. Publication of delivered data is restricted.

This clause is virtually insurmountable trouble for universities, as it requires written approval of the federal contracting officer to establish copyright in all other data. Contractor may not establish, without prior approval from the government, copyright in scientific and technical articles if these contain data first produced in the performance of the contract and published in academic, technical, or professional journals and symposia proceedings or similar works. Of course the inclusion of a “Special Works” clause destroys the so-called “fundamental research exemption” thereby inviting all the restrictions and requirements relating to export controls and export regulations and licensing requirements.

**Department of Defense Acquisition Regulations (DFARS)**

Two separate regulations govern computer software and other types of technical data in Department of Defense (DoD) sponsored contracts. The DFARS (DoD’s supplemental regulations to the FAR) do not make a distinction between commercial organizations and nonprofit educational institutions. Standard license rights granted to the government under DFARS may be modified through negotiation with DoD. (DFARS are available online at www.acq.osd.mil/dpap/dars/dfars/index.htm.)
Typically DoD’s allocation of rights in technical data recognizes the source of funds for the work as follows:

- Developed exclusively with government funds (unlimited rights)
- Developed with mixed funding (government purpose rights)
- Developed exclusively at private expense (limited rights)

(a) DFAR 242-204-7000, Disclosure of Information (Dec. 1991)

This clause restricts the contractor from public dissemination of any unclassified information without the prior written approval of the federal contracting officer. The contractor is further required to include this restriction in any subcontract under the prime contract. Any request from a subcontractor for authorization to release information must be forwarded from the prime contractor to the contracting officer.

In almost all cases, a university will not accept a “7000” clause as it contradicts most institutions’ policies on open and unrestricted dissemination of research results, but also because (as with the “Special Works” clause discussed above) the 7000 clause destroys the fundamental research exemption of NSDD 189 and opens the project to application of export control restrictions and export regulations and licensing requirements.

(b) DFAR 242-204-7000, Release of Information (Dec. 1991) Deviation

Under this deviation language, the contractor is free to publish, permit to be published, or distribute for public consumption, any information — oral or written — concerning the results or conclusions made pursuant to performance of the contract as long as the contracting office receives a copy of the intended release at least 30 days prior to such release for review and comment.

NASA Contracts

NASA data rights provisions are stated in NASA FAR Supplement, Part 1827.404. NASA generally follows the FAR data rights provisions described above. However NASA also typically adds a requirement that the contractor must have the permission of NASA to copyright, publish, or release software first produced in performance of a NASA-funded contract (NFS 1852.227-14). NASA believes this permission is necessary to assure that the dissemination of computer software developed by NASA or its contractor is most efficiently accomplished. (The NASA Far Supplement link page is www.hq.nasa.gov/office/procurement/regs/.)

For the benefit of the academic community, the NASA FAR Supplement states that the addition of the requirement (a (d)(3) provision) should not be used in contracts for basic or applied research with universities or colleges. FAR Alternate I for delivery of limited rights data may be appropriate for such contracts. (This reference is to FAR 52.227-14, Rights in Data – Alternate 1, which provides limited data rights for the government for data (other than computer software) developed at private expense that embody trade secrets or are commercial or financial and confidential or privileged.) Special permissions from NASA may be required to assure that university publication rights are preserved in NASA contracts.
**1905.5 ‘Work for Hire’**

A university should be extremely leery of agreeing to undertake research described as a “work for hire,” as in such agreements the third party (the sponsor) owns all data/outcomes. Invariably this precludes the investigator’s use of the research data for publication or public presentation without the explicit permission of the sponsor. In such cases, data would be owned by the sponsor as would any resulting intellectual property.

Research administrators may see “work-for-hire” language in a corporate sponsored research agreement, as the company may propose to treat university research as a procurement. For projects involving the conduct of corporate sponsored research using university facilities, work-for-hire language would be unacceptable as this would be viewed as transferring ownership of valuable property for less-than-arm’s-length consideration. For tax-exempt entities, the Internal Revenue Service (IRS) may look at this as providing a private benefit to a commercial entity, which is inconsistent with the Section 501(c)(3) nonprofit status of most universities.

The facts involved in a specific situation ultimately will guide what is appropriate for a PI and consistent with the institutional mission. If an institution determines that an agreement with work-for-hire language is acceptable, the institution would want to restrict involvement of students in such projects as the students’ rights to use the research results for dissertation or other educational advancement might be compromised.
Example

A faculty member may be commissioned by the National Academy of Sciences (NAS) to write a particular paper. An NAS agreement requires it to treat the commission as a “work for hire” whereby NAS owns the paper. Should an institution accept this restriction? Some institutions will not accept any publication restriction on a sponsored project and would require the faculty member to do this work through a “consulting agreement” with NAS. Other institutions may make an exception for an NAS-commissioned study once there is assurance that the work involves solely the PI and no student dissertation work.

¶1905.6 Joint Ownership of Data

Joint ownership of data allows both parties equal rights to use data generated in the course of the sponsored project. Agreeing to joint ownership of research data is a reasonable way to satisfy some sponsors’ requirements for ownership. For example, state agencies often are required to own the data funded with state funds. Joint ownership protects the university researcher’s use of data generated in the course of the research for education, publication, and future research purposes.

¶1905.7 Protection of Proprietary and Confidential Data

When a sponsor or third party believes that certain information and/or data are necessary for the institution to carry out its research, language protecting the proprietary property of the sponsor is necessary. Whether the sponsor is the federal government or a private corporation, the obligation of the receiving institution is to protect the information from public disclosure. Generally a prepublication review by the sponsor is adequate to assure that no confidential or proprietary data is inadvertently disclosed in the publication.

OSP staff should be diligent in reviewing the definition of “confidential” to ascertain that this definition is narrowly applied to information/data provided by the sponsor. Occasionally a sponsor will define the data arising during the course of the research within its definition of company “confidential information.” Left uncorrected, this creates an implicit publication bar at best; at worst, it gives the company automatic rights to research data. Also OSP staff should be on the lookout for a definition of “confidential information” that includes ideas, inventions, and other forms of IP, as this would conflict with the negotiation of IP provisions of the contract as well as Bayh-Dole obligations and most institutions’ IP policies.

Frequently today, companies that want to disclose company-proprietary (confidential) information will require the likely PI and the institution to sign a nondisclosure agreement (NDA) or confidentiality agreement (CDA). Some institutions take a hard line and argue that such agreements should only involve the PI who is receiving the information and the company. A company may insist that the agreement must be between the organizations that would ultimately be the binding parties to the research or clinical trial agreement.
As more institutions are agreeing to sign these agreements, the following are tips to consider when an institution is first presented with such an agreement:

◆ Be careful about the period of confidentiality. Accepting a long period of confidentiality at this stage will tie the institution’s hands in downstream negotiation of the research or trial agreement.

◆ Be careful about “scope creep.” The agreement may propose limitations on what the institution as a whole can do or with whom it can talk in the same or related areas of research. Always limit the field as narrowly as possible, and only to the PI directly involved.

◆ Be leery of indemnification language in CDAs.

◆ Watch for language that binds the institutions for all future agreements. At this stage the institution doesn’t know if the research relationship will proceed and under what conditions.

¶1905.8 ‘Sensitive but Unclassified’ Information

Although the terminology — “sensitive but unclassified” — is not new, federal agencies have become more concerned about certain types of data and information that is or could be perceived to be a national security concern; these concerns may be related to terrorism, biosecurity, computer security, or other areas that the government has determined would benefit from tighter oversight or security, but that fall short of being governed through formal classification procedures.

In March 2003 the Association of American Universities prepared a helpful summary and analysis entitled Definitions and Regulations Involved in the Classified-Sensitive Information-Unclassified Debate. Several “sensitive information” definitions cited in the document provide useful background for this discussion and are included in Figure 4.

Institutional Concerns

The absence of clarity in situations where “sensitive but unclassified” data or information may be involved places institutions in a precarious position. It is important for the OSP to assure that “sensitive but unclassified” information is defined in the work agreement, and that the PI and the institution know the consequences of having such information and the particular obligations they will incur concerning such data. The terminology is appearing in certain government contracts, but it is possible it could also find its way into grant agreements. No matter what the nature of the agreement, the ambiguity of the terminology and the potential impact on the conduct of research merit careful review by the PI and the OSP.

When the government “classifies” data or information or a project work scope there are clear and unambiguous regulatory requirements defining the impact of classification. If the government classifies the project, the institution may have to decide if it wants to participate in the project. Many institutions have drawn a “bright line” at participation in government-sponsored classified research projects and simply will not do classified research.
Wording about "special conditions" for "confidential treatment of sensitive information" has appeared in several NIH solicitations and awards dealing with bioterrorist agents. Institutions should be extremely diligent in reviewing these requests for applications and award documents for special conditions involving sensitive but unclassified information as they impose publication restrictions on any disclosure of sensitive information/data.

It is worth noting that institutions have been able to negotiate a clarification with NIH whereby the contract stipulates that in general the government may not designate

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**Figure 4: Background on Definition of ‘Sensitive’ Information**

The Association of American Universities publication, *Definitions and Regulations Involved in the Classified-Sensitive Information-Unclassified Debate*, contains several definitions of “sensitive information” as follows:

1. **Sensitive information**: The Computer Security Act of 1987 (P.L. 100-235) established requirements for the protection of certain information on federal government information systems. This information is referred to as “sensitive information,” defined in the act as: “Any information the loss, misuse, or unauthorized access to or modification of which could adversely affect the national interest or the conduct of federal programs or the privacy to which individuals are entitled under [the Privacy Act] but which has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept secret in the interest of national defense or foreign policy.”

2. **Sensitive, but unclassified information**: The Department of State describes “sensitive but unclassified information” as “…information which warrants a degree of protection and administrative control that meets the criteria for exemption from public disclosure set forth under … the Privacy Act.” This is a document designation comparable to “For Official Use Only.” DoD uses a similar mechanism for some categories of information called “controlled but unclassified.”

3. **Sensitive, but unclassified technical information**: The Department of Energy’s use of “sensitive, but unclassified” is described as: “Information for which disclosure, misuse, alteration or destruction could adversely affect national security or government interests. National security interests are those unclassified matters that are related to the national defense or foreign relations of the Federal Government. Governmental interests are those related, but not limited to, the wide range of government or government-derived economic, human, financial, industrial, agricultural, technological, and law enforcement information, as well as the privacy or confidentiality of personal information provided to the Federal Government by its citizens.”

4. **Sensitive homeland security information**: In an October 10, 2002, appearance before the House Science Committee, Director Jack Marburger of the Office of Science and Technology Policy defined sensitive homeland security information as “not a new category of information; rather it is the type of information that the government holds today which is not routinely available to the general public, such as law enforcement data and critical computer security threats and vulnerabilities.”

as “sensitive” information/data the results of the research conducted by the contractor during the performance of the contract. It is also helpful to ensure that the contract recognizes that sensitive data shall not include data already published or otherwise publicly available.

The government must formally and officially designate as “sensitive” information/data provided under the contract by the government or third parties and provide written notice to the institution in advance of transmission of such information to the contractor. The identification of such information must be done at the time it is provided so that it may be properly treated. For those institutions with a very strict policy on the protection of publication rights, a mandatory condition for institutional acceptance of the agreement should be that the government may not designate data or information arising from the conduct of the research as “sensitive but unclassified.”

1905.9 Material Transfer Agreements

In some universities, OSPs are responsible for material transfer agreements (MTAs). In other universities, the technology transfer office oversees MTAs. An MTA is an agreement that governs the rights and obligations between the “provider” of the material and the “recipient” of the material. MTAs often cover

◆ data rights,
◆ protection for intellectual property existing and yet to be developed using the provider’s material,
◆ a description of the material that is being transferred,
◆ the research use of the material by the recipient,
◆ prepublication reviews,
◆ acknowledgement of source of material,
◆ liabilities,
◆ penalties for breach of the MTA, and
◆ indemnification.

OSP staff should be on the lookout for restrictive language pertaining to data rights and intellectual property, especially if the “provider” is from the private sector or from a foreign source.

The following are some typical MTA trouble spots:

◆ Definition of the material
◆ Rights to modifications and derivatives
◆ Restrictions on the use of materials, including limiting the period of time during which the material may be used
◆ Publication or confidentiality clauses
◆ Licensing or ownership rights
Impact on future collaborations and research

Indemnification provisions

Penalties for breach of the MTA

The “NIH Policy on Sharing Biomedical Research Resources: Principles and Guidelines for Recipients of NIH Research Grants and Contracts on Obtaining and Disseminating Biomedical Research Resources” (64 Fed. Reg. 72090, Dec. 23, 1999, available at http://ott.od.nih.gov/policy/rt_guide_final.html) describes appropriate terms for disseminating and acquiring research tools developed with NIH funding. OSPs (and technology transfer offices) that are responsible for managing MTAs should ensure that NIH-funded investigators are fully informed of NIH’s expectations and requirements for sharing biological research tools. This policy describes when NIH funding may not be used for research involving materials if the provider places excessive restrictions on the sharing.

‘Nonnegotiable’ MTAs

Sometimes providers will label their MTAs (including the restrictive clauses) as “non-negotiable.” Never assume that this means that the provider will never be willing to negotiate. If the material is critically important to an investigator but the MTA’s terms are unacceptable to the institution, it is certainly worth approaching the provider to explain why certain provisions are problematic. Sometimes the provider will negotiate; sometimes it won’t. Accepting restrictive language in a material transfer agreement can impede commercialization of research discoveries downstream. If the MTA granted IP rights to the provider, an institution’s TTO must take these binding conditions into consideration when it evaluates the licensing potential for research discoveries that derived in some manner from the material governed by the MTA.

1905.10 Protecting Intellectual Property

The research mission of universities and colleges is embodied in the creation and dissemination of new knowledge. Traditionally that knowledge is shared with the public and the scientific community through scholarly publications and presentations. Since the 1980s an increasing vehicle for sharing discoveries and new technology is through the licensing of technologies and inventions to private corporations (“technology transfer”). Many states credit their universities’ technology transfer initiatives to the success of their regional economic development. Successful technology transfer also generates revenue for investigators and the university. The terms of a sponsored research agreement may also reflect that technology transfer is a legal obligation to the sponsor, whether the research is federally or privately funded.

The term “intellectual property (IP)” is the general descriptor for creations of the intellect that have commercial value and are protectable under the law, such as patents, copyrights, trademarks, or trade secrets. Why is protection of IP important? Legal protection establishes ownership in the IP and facilitates the use of the protected IP by others who have been granted licenses to use it. A gateway criterion for assessing the potential commercial value of an invention, discovery, or technology is whether it is
“protectable” under law. The U.S. Constitution authorizes the protection of patents and copyrights in the United States.\(^\text{14}\)

**Institutional Policies on IP**

Does the university own faculty inventions? Always? Sometimes? Under what circumstances? Does it matter if the inventor used university financial and/or physical resources? In the case of a public institution, does state law dictate ownership of inventions and discoveries? Do the institution’s policies provide for an appeal process if an inventor believes that the discovery is outside institutional ownership? What about student inventions/discoveries? OSP staff must be familiar with its own institutional patent policy to answer these, and many other, questions. (For resources for obtaining sample intellectual property policies and agreements, see Figure 6, page 1905:36, and ¶1930.)

In general most universities’ patent policies claim ownership of their employees’ (including faculty) inventions and discoveries. Some policies recognize the traditional rights to copyrightable works authored by faculty outright, while other policies acknowledge that the institution will assert its ownership of copyrightable faculty works only when substantial use of university resources has been involved.

Whether the sponsor is federal or nonfederal, all executed sponsored research agreements invariably contain legal and regulatory obligations to sponsors pertaining to data and IP rights. The training for any new OSP staff, therefore, should include the following:

- The fundamentals of intellectual property
- The institution’s policies regarding data rights, patents, and other intellectual property
- Most importantly, how to read proposed sponsored agreements to ascertain that the sponsor’s data and IP expectations are consistent with university policies

\[\text{¶1905.11 \hspace{1em} Patent Protection}\]

A patent is intended to provide an incentive to invention and discovery. In return for openly sharing information, the patent permits the owner to have a period of time (generally 20 years under current U.S. law) during which the owner has exclusive right to use the property covered under the patent.

Key points of the U.S. patent system include the following:

- Anything that is (1) useful, (2) novel, and (3) unobvious may be patented.
- Subject matter must be within “patentable” subject matter, as defined by the patent statutes.
- There are three types of patents: utility, design, and plant.

\(^{14}\)U. S. Constitution, Article 1, Section 8, Clause 8 states, “The Congress shall have the power…to promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries.” U.S. patent law is under the jurisdiction of the U.S. Patent and Trademark Office, www.uspto.gov. U.S. copyright law is under the jurisdiction of the U.S. Copyright Office, www.copyright.gov.
Definition of an invention is made up of only two parts: “conception” and “reduction to practice.”

U.S. patent law defines what may be patented and what is not patentable. For example, mathematical formulae, laws of nature, and “anything repugnant to morals or public policy” are not patentable by statute.

For purposes of patent law, “utility” means that the invention has some practical, useful purpose. Design patents are more restricted: A design patent protects only the ornamental appearance of an article, and not its structure or utilitarian features. If a design is utilitarian in nature as well as ornamental (such as a computer mouse design that is very comfortable to use), a design patent will not protect the design. Such combination inventions (both ornamental and utilitarian) can only be protected by a utility patent. A design patent has a term of 14 years from the date of issuance. Special patent laws apply to plants, hybrids, seeds, and agricultural plant products.

Patent Process

Understanding patent law is best left to the experts; however, some background on patents will be helpful to research administrators. In and of itself, a patent does not constitute technology transfer. The commercialization of intellectual property is dependent on many nuances, not the least of which is the prospect of a market for the technology and whether the technology can be protected — through patent, copyright, or other legal mechanisms.

Timing is often a key factor for patent eligibility: Has the technology been publicly disclosed? If so, when? Has the technology been in public use or for sale? In the United States, a patent application must be filed no later than one year after a public disclosure. In most of the rest of the world, the patent must be filed prior to public disclosure. In the United States, the patent system is built around the assumption that the “first to invent” has claim to patent protection. In most of the rest of the world, the patent protection goes to the “first to file.” These are crucial distinctions in global patent law. OSP staff should generally refer patent questions to the TTO where expertise in current patent law is available. Patent law does change from time to time; indeed currently there are substantial modifications to U.S. patent law under consideration by Congress.

Application. The patent application must describe the invention, the inventor must sign an oath that he/she believes that he/she is the first inventor, and the process of making and using the technology must be disclosed

◆ in full, clear, concise, and exact terms; and
to enable any person skilled in the art to make and use the invention without undue experimentation. (Applications must contain specifications, claims, and drawings, if required.)

Provisional Application. One mechanism to fast-track patent protection in the face of impending public disclosure is through the filing of a “provisional” patent application. There are minimal requirements for filing a “provisional application” (PA), but a regular full patent application must be filed within one year of filing a PA. While the PA assures an earlier filing date, the coverage is limited to only the part of the invention that is disclosed in the provisional application.

Inventorship
The simplest and clearest way to address “inventorship” in sponsored agreements is for the institution to reach agreement with the sponsor that inventorship is determined by U.S. patent law. Authorship is not a valid test of inventorship. An inventor is anyone who contributes to the conception or reduction to practice but not someone who was following orders. For example, inventors may be the scientific collaborators who came up with the method to make a new chemical compound but not the technician who assisted in the laboratory work. (In a scientific publication there may be a number of authors who made contributions to the science, such as in the creation and understanding of a new compound the person who carried out the crystallography that helped understand the structure of the new compound would be an author, but the crystallographer wouldn’t typically be an inventor.)

Additionally revenue-sharing plans at many institutions are not limited strictly to inventors, but may permit inventors to share IP revenue with other collaborators and contributors. Research administrators should work with the TTO to become familiar with the institution’s patent policy and IP revenue-sharing policies.

1905.12 The Bayh-Dole Act
The Bayh-Dole Act was enacted in 1980 and stands as the watershed for today’s technology transfer in American colleges and universities. The act was amended and amplified by various executive and Congressional actions, and it now collectively describes federal law governing rights to inventions conceived or first reduced to practice during research under a federally funded grant, contract, or cooperative agreement at colleges/universities and small businesses. The Department of Commerce is designated as the federal agency to promote commercialization and has responsibility for implementing the regulations issued under the act.

The purpose of Bayh-Dole is to
◆ promote collaboration between commercial concerns and nonprofit organizations including universities;
◆ promote use of inventions arising from federally sponsored research or development; and
◆ ensure that inventions are used to promote free competition and enterprise.
Prior to enactment of Bayh-Dole, title to inventions under federal funding vested in
the funding agency unless the individual institution and agency had entered into an
agreement regarding rights to inventions. There was very little patenting by federal
agencies; agencies only wanted to do nonexclusive licenses. Consequently very little
federally funded research found its way to public benefit. Industry was hesitant to fund
projects at universities because a PI’s program of research invariably involved federal
funding, and that meant uncertainty of rights to inventions.

Under the provisions of the Bayh Dole Act
◆ The university has the right to elect to retain title to inventions developed with
  federal funding.
◆ The university must file patents on inventions they elect to own. (NIH has created an
  exception to this provision for biological materials.)
◆ The university must make disclosure of the invention to the federal government
  within two months after receipt of disclosure from the investigator.
◆ The university must make written election of title within two years of the disclosure.
◆ If title is elected, the university must file a patent prior to any statutory bar.
◆ The government retains certain rights in the invention.
◆ Government rights include a royalty-free, nonexclusive license for governmental
  purposes including use by subcontractors.
◆ The university may not assign its rights, except to a patent management entity,
  without the agency’s permission.
◆ The government may exercise march-in rights. (“March-in” rights allow the
  government to order the university to grant certain licenses, if necessary, for such
  things as ensuring public use or health and safety.)
◆ Royalty sharing with inventors is required.
◆ The balance of royalties must be used for the support of scientific research or
  education.
◆ A written agreement with all persons working on the research except clerical or
  nontechnical staff is required.
◆ A reasonable attempt to license to small business must be made.
◆ Substantial manufacture of product in the United States should occur if exclusively
  licensed.

Bayh-Dole Exclusions
Exceptions under Bayh-Dole are allowed in three circumstances as follows.
(1) An agency may decide that title to inventions is better vested with the federal
  agency. Such a decision — termed a “Determination of Exceptional Circumstances”
  (DEC) — must be made prior to the award of federal support and becomes a part
  of the sponsored project agreement. Under Section 401.3(a)(2) of the Bayh-Dole Act, an
  agency may determine that restriction or elimination of the right to retain title to any
subject invention will better promote the policy and objectives of 35 USC 18. The agency must file an “exception circumstance” determination with the Department of Commerce, which will then rule on its validity. Reasons for a DEC may involve issues of sensitive research or national security.

If the institution is responding to an RFA that includes a DEC, the institution should examine the DEC to assure that it is as narrowly constrained as required by Section 401.3(b), for example restricting the DEC to a particular field of use, and in compliance with Section 401.3(e) to fully justify and support the use of the DEC.

(2) Congress has authorized certain programs that specifically override Bayh-Dole rights to intellectual property for universities. One program is the Department of Defense’s (DoD) Advanced Technology Program (ATP). Prime applicants must be private sector entities and IP rights are specifically provided to the company, even if a university is a subawardee on the prime. Some institutions do not permit ATP funding as it contradicts their IP and patent policies. Other institutions participate in ATP research in order to have the benefit of participation in the research project. Some institutions have been able to negotiate with the prime awardee a “grant back” of rights to use university-generated IP for internal research and education purposes.

(3) No scholarship, fellowship, training grant, or other funding agreement made by a federal agency primarily to an awardee for educational purposes will contain any provision giving the federal agency any rights to inventions made by the awardee.

Rights for Subawardees
When a university is a subawardee under a prime award made to another organization, the subawardee retains the same rights provided for the prime grantee/contractor by the sponsor. The prime awardee is not entitled to claim, as a part of the consideration for awarding the subaward, any rights in the subcontractor’s subject inventions. The prime may legitimately require the subawardee to provide access to such invention, copyright information, and data as may be necessary to meet the reporting requirements of the prime to the sponsor.

Title to Patentable Biological Materials
NIH issued a policy that outlines the conditions under which biological materials on which the contractor elects not to file a patent application may be licensed. This policy is intended to encourage the dissemination of biological materials through licensing without patent protection. The NIH contractor/grantee electing title to patentable biological materials and requesting to distribute them through licensing as “unpatent-

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15 35 USC 18 “Patent Rights in Inventions Made with Federal Assistance.”
16 15 USC 278n, “Advanced Technology Program.”
able tangible research materials” must agree to a set of sharing conditions specified by NIH. The terms of the license must be no more restrictive than they would have been if the material had been patented.

1905.13 IP Rights in Nongovernmental Agreements

Intellectual property language in agreements from nongovernmental sponsors requires diligent review and consideration. Negotiation of mutually acceptable data and patent rights language can consume legendary amounts of time. This can be true whether the agreement is an MTA where no funds are involved or a multimillion-dollar sponsored research agreement funded by a private company.

Corporate Sponsors

The number of corporate sponsored research agreements is on the rise, reflecting an increasing desire by university researchers to collaborate with industry, and vice versa. The research is interesting and the opportunities for alternative funding when competition for federal funds is tight are attractive to researchers. The issues in negotiating mutually acceptable IP terms in corporate sponsored research agreements reflect the cultural gaps and differing expectations between the academic researcher (and his or her institution) and the private sector. Not infrequently companies assert that funding the research is sufficient to entitle them to any IP generated in the conduct of the project and it should be assigned or licensed at no additional cost to the company.

Elements of a good corporate sponsored research agreement governing rights to intellectual property would address the following:

◆ Clear and reasonable definitions of terms
◆ Ownership (sole, joint, and third-party rights)
◆ Oversight of IP disclosure
◆ Management of IP
◆ Reporting, filing, and election of title
◆ Payment of patent costs
◆ Reservation of rights for research tools
◆ Options and licenses for commercialization of IP arising from research project’s scope of work
◆ Dispute resolution relating to IP

NIH Guidance. In the early 1990s, NIH observed that universities were entering into multimillion-dollar research agreements with companies whereby the sponsoring company was granted an exclusive right to intellectual property arising from the university laboratories being supported. What NIH further observed was that these laboratories were also receiving NIH funds and often considerably more than the company was providing. In effect, then, the company was getting the IP benefits of taxpayer dollars. In 1994 NIH issued a policy guidance document for NIH grantees,
“Developing Sponsored Research Agreements: Considerations for Recipients of NIH Research Grants and Contracts.”18

In brief this guidance reminded an institution of its obligations under Bayh-Dole and that it should refrain from engaging in activities that undermine its abilities to fulfill its responsibilities and obligations to the federal government. Research administrators will find the NIH guidance an invaluable resource when negotiating corporate sponsored research agreements, especially if the researchers involved have NIH funding in their laboratories.

Under the guidance, NIH’s “Points for Consideration” (for all sponsored research agreements) include the following:

◆ Academic freedom
◆ Dissemination of research results
◆ How research results will be used (“utilization”)
◆ Requirements for U.S. manufacture
◆ Notification requirements and record keeping

NIH reminds institutions to give agreements heightened scrutiny when the
◆ amount of financial support from the company exceeds $5 million/year or $50 million in total;
◆ proportion of funding by sponsor exceeds 20 percent of a grantee’s research funding;
◆ sponsor’s prospective licensing rights cover all technologies developed by a major component of a grantee organization; and
◆ duration of the agreement is five years or more.

Nonprofit Sponsors

Just as IP policies vary from company to company, nonprofit sponsors have different expectations regarding intellectual property arising in whole or in part from their funding. Increasingly nonprofit organizations have been modifying their patent policies and IP terms to require their grantees to involve them more actively in the technology transfer process. While most nongovernmental organizations (NGOs) will honor the patent policy of the university grantee organization, it is absolutely necessary to read the terms and conditions of these funders carefully prior to submitting a proposal or accepting an award. (For example, large sponsors such as the Susan B. Komen Foundation, the American Heart Association, and the American Cancer Society have changed their IP terms in recent years.)

Some NGOs do not routinely share their IP policies in proposal guidelines; the “terms and conditions” are included as a part of the award acceptance packet. These

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must be read carefully. It is highly recommended that the sponsored programs office coordinate review of these conditions with the TTO. Some of the conditions may place excessive reporting and coordination burdens on the TTO.

Technology transfer and the prospect of related new revenues are receiving increasing attention in the 21st century from the NGO community. Many sponsors require sharing the revenue arising from commercialization of IP that their funds helped support. Some are clear about proportional relationships to total funding, some have thresholds of revenue above which they would expect sharing. Some recognize that institutions may have Bayh-Dole rights and federal obligations in the IP; others do not.

The following are areas of possible concern when accepting awards from NGOs:

◆ Sharing of royalties
◆ Pre-approval of any licensing for commercialization
◆ March-in rights if licensing partner(s) fails to produce on commercialization benchmarks
◆ Return of IP rights to sponsor if university decides not to elect to patent invention or discovery

Few, if any, NGOs reimburse the university’s overhead costs. For some institutions, the reimbursement of overhead costs factors into agreements with NGOs regarding revenue sharing. For example, a university may require a written royalty sharing agreement that stipulates that royalties accruing to the NGO first reimburse the grantee’s unrecovered indirect costs on the NGO direct research support, before any proportional sharing of royalties is paid to the NGO. In addition universities cite the accumulated investment by the university and any prior sponsors in supporting the lab, personnel, and prior research as considerations in negotiating what is a reasonable proportional share of NGO royalties.

If the NGO’s IP conditions are troublesome to the institution, the institution should take exception to the terms of the award at the time the proposal is submitted. Sponsored programs administrators should be proactive in providing guidance to researchers about problematic terms and conditions proposed by NGOs. If certain conditions are known to be unacceptable to an institution, researchers should know that before they expend considerable effort preparing a proposal.

**Licensing Terms**

OSP staff should be leery of license terms spelled out in research agreements. A “license” is a legal agreement or contract that permits one party to use intellectual property belonging to another under mutually agreed upon terms. In other words, a license is a grant of a right to use IP. Research is unpredictable. Neither the researcher nor the sponsor can predict what potential IP may arise from the project.

Sponsored research agreements establish royalty rates that have the effect of setting the commercial value of unknowns. A “royalty” is a consideration or compensation paid to the licensor in exchange for certain rights in technology that the licensor is providing to the licensee. (Royalties may be based on many factors including sales, up-front fees, and performance benchmarks.) An exclusive license gives the licensee the sole author-
ity to exercise its rights contained in the license agreement. If another party exercises these rights, including the owner, the exclusive licensee can obtain protection and relief in court to prevent the party from infringing on its exclusive rights. Exclusive rights may be limited to a period of time, a country, a field of use, etc.

Cooperation between the OSP and the institution’s TTO to restrict the license terms in a corporate sponsored agreement to the extent possible is invaluable. Sometimes companies need the reassurance of a scale of royalties within which they may expect to negotiate. But it is most prudent to avoid any licensing conditions or royalty rates, other than the option to negotiate in good faith for a limited period of time.

What is the risk of committing to license IP in a corporate sponsored research agreement? There are two potential risks for the typical college or university:

1. Agreeing to assign, license, or otherwise provide the IP from research projects to the corporate sponsor may be inconsistent with the institution’s Section 501(c)(3) nonprofit status and its mission of education, research, and public service. An obligation to license IP on a royalty-free basis or at pre-established rates could be seen as providing a direct benefit to the private sector at less than fair market value, which is inconsistent with an institution’s charitable status and obligation to support the public (not private commercial) good.

2. Use of facilities funded by tax-exempt bonds for private benefit may jeopardize the tax-exempt status of the bonds. IRS Revenue Procedure (Rev. Proc.) 97-14 regarding “Guidelines for Research Agreements” is applicable when sponsored research is conducted in facilities constructed in whole or in part with tax-exempt bond proceeds, and it describes the conditions under which a research agreement does not result in private benefit use. Basic research, for purposes of Section 141 of the 1986 Internal Revenue Code, means any original investigation for the advancement of scientific knowledge not having a specific commercial objective. For example, product testing supporting the trade or business of a specific nongovernmental person is not treated as basic research.

Under the “Guidelines for Research Agreements,” Section 5 establishes the definition and restrictions that pertain to corporate-sponsored research at Section 5.02. The guidance stipulates that any license or other use of resulting technology by the sponsor is permitted only on the same terms as the recipient would permit that use by any unrelated, nonsponsoring party (that is, the sponsor must pay a competitive price for its use) with the price paid for that use determined at the time the license or other resulting technology is available for use. This clearly is intended to preclude establishing licensing terms at the time the research agreement is executed. Although the institution receiving the corporate support need not permit persons other than the sponsor to use any license or other resulting technology, the price paid by the sponsor must be no less than the price that would be paid by any nonsponsoring party for those same rights.

1926 USC 141, “Private Activity Bond; Qualified Bond.” The “Guidelines for Research Agreements” were issued Jan. 10, 1997.
Section 5.03 of this same IRS guidance stipulates the conditions that apply to research agreements relating to property used pursuant to a joint industry-governmental cooperative research agreement. Under cooperative research agreements, corporate sponsors are entitled to no more than a nonexclusive, royalty-free license to use the product of any of that research.

**Nonexclusive IP Rights**

Companies frequently seek nonexclusive, royalty-free, perpetual, worldwide, for any purpose, sublicense rights to IP arising from company sponsored research. What’s the problem with a nonexclusive, royalty-free license? Read the language carefully. Is the nonexclusive license limited to internal research purposes? If so, this license is probably not a problem. If the purpose of the license is not restricted to research, it may present a problem.

Issues for an institution to consider before accepting agreements granting a company nonexclusive IP rights include the following:

- Is the nonexclusive right limited to the field of interest for the sponsor?
- Is the research in an area already dominated by the sponsor (there may be nothing for an institution to protect)?
- Is the institution getting fair compensation — such as full facilities and administrative costs recovery and funding that would benefit the institution?

Research administrators have to recognize and respect what corporate sponsors’ priorities are and be prepared to negotiate a fair and reasonable business relationship.

**Preferred Language.** Preferred language in a sponsored research agreement grants a royalty-free license to the sponsoring company limited to its internal research purposes. Any license for commercial uses whether for exclusive or nonexclusive rights should be written as “an option to negotiate” with appropriate time limits. Royalty-free sublicense rights should be limited to allowing use of the IP for the company’s internal purposes only, avoiding the company’s right to sublicense to a third party the IP for the company’s financial benefit.

**1905.14 Copyrightable Technology**

OSP staff should know the application of its institutional policy regarding and understand the protections the policy gives to the traditional rights of faculty in textbooks, publications, and the transfer of rights to journals. OSPs should be aware of the new NIH recommendation for posting online publications arising from NIH-funded research within one year of publication. This is not a requirement at this time but could become one in the future.

**Software**

Rights in software can be complicated. Some software is protectable through patent but most software applications are protected through copyright. Many computer scientists regard their research-developed software as “open-source” software. An OSP should
know what the developers of the software mean when they say “open source” in the event the sponsor questions the term in an agreement. For example, do they intend to post source code on publicly accessible sites?

§1905.15 **IP Concerns in Small Business Awards**

Universities often participate as subawardees to small businesses in phase I and phase II Small Business Innovative Research (SBIR) programs and under the Small Business Technology Transfer (STTR) program.²⁰ The STTR program additionally mandates a subaward with a collaborating academic institution and an IP plan as part of the award.

Two areas of concern often arise with SBIR/STTR projects:

1. The small business and the institution should have clear and mutually acceptable data and intellectual property rights and obligations. (The institution’s TTO already may be licensing university technology to the small business.)

2. If the small business is already dealing with the institution’s TTO, issues of financial conflicts of interest may arise.

Depending on the institution’s policy, these SBIR/STTR relationships may require special oversight. If the research project involves clinical research, even greater scrutiny is warranted because the research requires the participation of human volunteers. Sometimes the small business may not have the resources to provide appropriate indemnification; it may not be familiar with Bayh-Dole rights for subrecipients; and it may lack legal sophistication in agreement language. There also are often financial conflicts of interest between the institution’s faculty (perhaps even the institution has an equity share) and the small business. Because relationships with small businesses are often high-risk relationships, they deserve special scrutiny.

As with all agreements, the OSP should read the prime SBIR/STTR application carefully. The institution should require that the small business share the funding agency’s notification of grant award. And, ultimately, of course, an OSP should read the subaward document very carefully to assure that all terms and conditions pertaining to data and IP rights are consistent with institutional policy.

§1905.16 **CREATE Act**

The patent laws have recently been modified to implement the Cooperative Research and Technology Enhancement Act (CREATE Act), although it is still unclear what application the CREATE Act has for university research collaborations.²¹ This act is intended to foster collaborative research between different organizations. The act creates an exemption (“safe harbor”) from the “prior art” invalidation rules for confi-

²⁰ See the Small Business Administration page for these programs at www.sba.gov/sbir/indexesbir-strr.html.

²¹ CREATE Act is P.L. 108-453. See 70 Fed. Reg. 7 (Jan. 11, 2005), for the interim rule implementing the CREATE Act for patent statutes.
dential disclosures among collaborators. (“Prior art” is information such as publications, patents, or general knowledge that is in the public domain. Prior art cannot be patented — a patent is for something “novel,” i.e., something not previously known. Thus “prior art” is currently considered invalid (for new patents) under patent law.)

For the CREATE act to apply, a joint research agreement, defined as a “written contract, grant, or cooperative agreement entered into by two or more persons or entities for the performance of experimental, developmental, or research work in the field of the claimed invention,” must be in place. Three conditions must be met for an invention to be recognized under the act:

1. The claimed invention was made by or on behalf of parties to a joint research agreement that was in effect on or before the date the claimed invention was made.
2. The claimed invention was made as a result of activities undertaken within the scope of the joint research agreement.
3. The application for patent for the claimed invention discloses or is amended to disclose the names of the parties to the joint research agreement.

The requirement for a written joint research agreement may be problematic for universities. The typical inter-institutional agreement used between TTOs may be adequate to address the issues raised by the CREATE Act; however, these agreements are more often executed after the date of the claimed invention. To take advantage of the CREATE Act, the collaborative research agreement should be written to describe the broadest work scope for the project.

1905.17 Intellectual Property Plans

As noted above in the discussion of data sharing plans, institutions may be required by a federal sponsor, especially NIH, to include a detailed plan for the treatment of intellectual property that will govern the research outcomes from the proposed research. Special conditions may apply when the deliverable on a contract is software/data-bases. NIH expects the contractor to prepare a plan for resolving IP rights and legal issues concerning rights to data that may be included in databases delivered to the government, which includes obtaining “know-how” or otherwise acquiring rights from other sources for constructing the database. NIH may expect a contractor to provide a full disclosure of intent to patent or copyright the work supported under the contract. These conditions are situational to the contract and should be carefully evaluated and fully understood by the institution and the PI before the contract is executed. (See Figure 2 on page 1905.9 for a sample data sharing/IP plan.)

Elements of a typical IP plan include coverage of:

◆ inventorship by all involved parties and ownership of IP (sole inventions solely owned by each party and joint inventions, jointly owned);
◆ reservation of rights (e.g., ability to practice inventions and discoveries for continuing research and educational purposes); and
◆ use of inter-institutional agreements if multiple institutions are involved in the research project.
¶1905.18 Special Issues for Small Institutions

At a small institution, the sponsored research and technology transfer functions may be housed in the same office and may also be performed by the same staff. The general counsel or legal office may or may not be an available resource for advice about data rights and IP protection. Attendance at a workshop presented by professional organizations such as Association of University Technology Managers (AUTM), National Council of University Research Administrators (NCURA), or Society of Research Administrators (SRA) can offer invaluable means to learn the basics in this area, to network and find contacts with expertise that a smaller office may not have access to, and to identify specific terms and conditions in agreements that can be problematic.22 (For a discussion of “Establishing Technology Transfer Operations at PUIs,” see ¶2320.1.)

It is often difficult to assure PIs at all sizes of institutions that institutional policies and priorities are the standard in the field and not peculiar to the institution. No matter the size of the institution, there may be pressure to get the money, driving the PI to expect the institution to compromise its policies to comply with a sponsor’s expectations. All institutions must guard against this.

¶1905.19 Conclusion

A research administrator should know and understand the basics of the institution’s data and IP policies, including the following: How are the policies generally interpreted? Under what conditions are exceptions to policy considered? Who has the authority to approve an exception? Most importantly he or she needs to know when and to whom to refer investigators, students, and research staff when questions of ownership and rights to data and intellectual property arise. To this end, OSP staff will work closely with the institution’s technology transfer office and the general counsel/legal office. Figure 5 includes an overview of some key considerations involving data rights and IP that OSP personnel should keep in mind when negotiating awards.

Data rights and intellectual property are complex subjects embodied in institutional policy and federal, state, and sponsor language in the legally binding research agreement. OSPs set the course for clear understandable data rights and downstream IP opportunities, rights, and obligations through the conditions agreed to in the research agreement.

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Figure 5: Protecting Data Rights and Intellectual Property: Factors for Success

To protect its data rights and intellectual property in sponsored agreements, an institution should consider the following:

- Read the terms and conditions of all program announcements, RFPs, RFAs, and solicitations carefully and, preferably, repeatedly.
- Take exception to any and all problematic provisions at the time the proposal is submitted.
- Read award agreements and terms and conditions (which may not have been provided with the funding opportunity) carefully and repeatedly, prior to executing the award agreement.
- Data rights, intellectual property, and publication restrictions can be found in multiple sections of proposed agreements, including those not labeled IP or “data rights.”
- Discuss data rights and intellectual property definitions, rights, obligations, and provisions with the PI.
- Excellent communications and working relationships between the institution’s technology transfer office and office of sponsored programs go a long way toward properly understanding and protecting data rights, intellectual property, and potential commercialization of research outcomes.
- The institution may have special concerns when IP rights are or may be perceived to be related to individual and/or institutional financial conflicts of interest.
- What is anticipated, negotiated, or accepted today builds the foundation for what can be done in the future. (The same is true for compromise.)

To assure that faculty research endeavors are adequately protected, data and IP language in an agreement must recognize that data and potentially IP are created in the conduct of research and that technology transfer through protection of IP and licensing opportunities must be accomplished in accordance with institutional policy and federal and state laws and regulations. Thoughtful long-range planning at the proposal, negotiation, and award stages accomplishes the merger of an institution’s research goals, data and IP protection, and ultimately technology transfer. Suggested resources for additional assistance are included as Figure 6, page 1905:36.
**Figure 6: Suggested Resources**


- Originally developed by the National Institutes of Health, the Interagency EDISON (iEDISON) system is an online information management system for invention reporting that is used by the majority of the federal granting agencies. See www.iedison.gov.


- The *NIH Guide for Grants and Contracts* is the official publication for NIH medical and behavioral research grant policies, guidelines, and funding opportunities. It is also used by NIH contracting offices (dealing with corporate sponsored research agreements). Available at http://grants.nih.gov/grants/policy/notices.htm.

- Stanford University’s library copyright pages are helpful and are located at http://fairuse.stanford.edu.

- University of Texas’s intellectual property pages are a good resource and are located at www.utsystem.edu/ogc/intellectualproperty/INDEX.HTM.
Practical Tools

This section includes practical guidance and tools relating to data rights and intellectual property. These materials are culled from a variety of authoritative sources.

Resources for Sample Intellectual Property Policies, Agreements

AIS editors

The Association of University Technology Managers (AUTM) has compiled a collection of links to college and university sites for sample policies relating to intellectual property, animal care, conflict of interest, scientific misconduct, human resources, and other topics. Also included are links to sample agreements, such as those for copyright assignment, confidentiality, licensing, material transfer, research, software development and distribution, and others. Access the links at www.autm.net/aboutTT/aboutTT_policies.cfm.

NIH’s Office of Technology Transfer (at www.ott.nih.gov) also provides a variety of sample forms and model agreements including the following:
- Employee Invention Report (EIR)
- Confidential Disclosure Agreement (CDA)
- Inter-Institutional Agreements
- License Application
- Model Cooperative Research and Development Agreements (CRADAs)
- Model License Agreements
- Material Transfer Agreement (MTA)
- Royalties — W-9 Form

Guidelines for Technology Licensing

The Association of American Medical Colleges and eleven of the nation’s top research universities have released a white paper, “In the Public Interest: Nine Points to Consider in Licensing University Technology.” According to the authors, the reason for issuing the paper is “to encourage” institutions when undertaking academic technology transfer “to analyze each licensing opportunity individually in a manner that reflects the business needs and values of their institution, but at the same time, to the extent appropriate, also to bear in the mind the concepts articulated herein when crafting agreements with industry.” Further, the authors wish “to foster thoughtful approaches and encourage creative solutions to complex problems that may arise when universities license technologies in the public interest.”

Although acknowledging that each licensing opportunity must be analyzed individually, the paper does suggest that there are core values to consider, including the following:
(1) Universities should reserve the right to practice licensed inventions and to allow other nonprofit and governmental organizations to do so.

(2) Exclusive licenses should be structured in a manner that encourages technology development and use.

(3) Strive to minimize the licensing of “future improvements.”

(4) Anticipate and help to manage technology transfer-related conflicts of interest.

(5) Ensure broad access to research tools.

(6) Enforcement action should be carefully considered.

(7) Be mindful of export regulations.

(8) Be mindful of the implications of working with patent aggregators.

(9) Consider including provisions that address unmet needs, such as those of neglected patient populations or geographic areas, giving particular attention to improved therapeutics, diagnostics, and agricultural technologies for the developing world.

In addition to containing discussions of these nine points for consideration in licensing, useful commentary on each of the points, examples, and sample contract language are also included as appendices to the paper.


**University-Industry Collaborations**

The University-Industry Demonstration Partnership (UIDP) was formed “to enhance the value of collaborative partnerships between university and industry in the United States.” Among its activities, the UIDP

◆ Fosters dialogue between universities and industry on issues such as technology transfer, licensing, sponsored research, and the broader aspects of university-industry partnering.

◆ Develops/beta tests tools and approaches that “unify and streamline” university-industry agreements. (A current project is TurboNegotiator, an approach and software tool designed to minimize time-to-agreement in sponsored research.)

◆ Seeks out best practices in university-industry partnering around the globe; disseminates these to its members through presentations, publications, and town hall discussions.

UIDP has published a set of “Guiding Principles” and “Living Studies” or case studies most of which “focus on challenges at the beginning of research partnerships, when sponsored research agreements are negotiated.” The organization also has gathered together some “Tools & Tips,” where members share practical information including the following sample agreements:

◆ Materials Transfer Agreement – Company Drug to University Researcher

◆ Applied Sciences and Engineering Solutions Research Program
◆ Open Collaboration Principles
◆ Agreement for Testing Services

The UIDP Web site is www.uidp.org.
1930.2 **Resources for Ethics in Data Management**

AIS editors

A video-based resource for ethics in data management is available from the Office of Research Integrity (ORI) at the Department of Health and Human Services. The product consists of 10 “video vignettes” addressing issues surrounding data sharing, technology transfer, data storage, data falsification, data ownership, sharing of resources, and collaboration. The product was created by Syracuse University, with funding from ORI. The videos are available at [http://ori.hhs.gov/education/products/syracuse/index.shtml](http://ori.hhs.gov/education/products/syracuse/index.shtml).

Specific videos include the following:

- Resource Request
- Technology Transfer
- Data Sharing
- Protocol Sharing
- Data Storage
- Misrepresentation of Data
- Collaboration
- Data Falsification
- Data Ownership
- Sharing Resources
1930.3 Ideas for Increasing Technology Transfer

AIS editors

According to the Government Accountability Office (GAO),\(^1\) officials at the Department of Energy laboratories have taken a number of steps to further technology transfer, such as the following, which might also prove helpful for university research tech transfer practices:

- Officials regularly evaluate their laboratories’ pending research publications for evidence of inventions or technologies that have not been disclosed for commercial opportunities that may have been overlooked.
- Officials at one lab expanded the office’s reach by working with their laboratory’s public relations office to promote selected technologies, which proved successful in attracting licensees for those technologies.
- Several laboratories brought in entrepreneurs-in-residence, representing venture capital firms, with strong backgrounds in business and science to help identify and commercialize promising technologies.
- Several laboratories said they invest a portion of the laboratories’ licensing income in other technologies in need of further research and development to help make them more attractive to outside investors.
- Some laboratories have taken steps to simplify the negotiation of technology transfer agreements, such as creating templates or standard terms and agreements that have been pre-approved. At least one laboratory has taken this approach a step further by creating standardized agreements that apply to specific entities with which the laboratories expect to have a longer-term partnership.

To better measure, and improve, the effectiveness of technology transfer efforts, GAO recommends considering the following approaches:

- explicitly articulate priorities for such efforts;
- develop clear goals, objectives, and performance measures in line with these priorities;
- clarify which activities qualify as technology transfer;
- collect reliable performance data and further consider ways to use the data to monitor the progress and effectiveness of tech transfer efforts;
- ensure sufficient access to both technical and business development expertise;
- develop a systematic approach to identify technologies with commercial promise; and
- develop a comprehensive means of sharing information, such as a Web-based clearinghouse for technologies ready for further development or commercialization.


1930.4 **Tips for Ethical Writing**
Miguel Roig, PhD, St. Johns University

The following guidelines are taken from “Avoiding Plagiarism, Self-Plagiarism, and Other Questionable Writing Practices: A Guide to Ethical Writing” by Miguel Roig of St. Johns University with funding from ORI. The guide is available at http://ori.dhhs.gov/education/products/plagiarism.

**Guideline 1:** An ethical writer ALWAYS acknowledges the contributions of others and the source of his/her ideas.

**Guideline 2:** Any verbatim text taken from another author must be enclosed in quotation marks.

**Guideline 3:** We must always acknowledge every source that we use in our writing; whether we paraphrase it, summarize it, or enclose it quotations.

**Guideline 4:** When we summarize, we condense, in our own words, a substantial amount of material into a short paragraph or perhaps even into a sentence.

**Guideline 5:** Whether we are paraphrasing or summarizing we must always identify the source of your information.

**Guideline 6:** When paraphrasing and/or summarizing others’ work we must reproduce the exact meaning of the other author’s ideas or facts using our words and sentence structure.

**Guideline 7:** In order to make substantial modifications to the original text that result in a proper paraphrase, the author must have a thorough understanding of the ideas and terminology being used.

**Guideline 8:** A responsible writer has an ethical responsibility to readers, and to the author/s from whom s/he is borrowing, to respect others’ ideas and words, to credit those from whom we borrow, and whenever possible, to use one’s own words when paraphrasing.

**Guideline 9:** When in doubt as to whether a concept or fact is common knowledge, provide a citation.

**Guideline 10:** Authors who submit a manuscript for publication containing data, reviews, conclusions, etc., that have already been disseminated in some significant manner (e.g., published as an article in another journal, presented at a conference, posted on the internet) must clearly indicate to the editors and readers the nature of the previous dissemination.

**Guideline 11:** Authors of complex studies should heed the advice previously put forth by Angell & Relman (1989). If the results of a single complex study are best presented as a ‘cohesive’ single whole, they should not be partitioned into individual papers. Furthermore, if there is any doubt as to whether a paper submitted for publication represents fragmented data, authors should enclose other papers (published or unpublished) that might be part of the paper under consideration (Kassirer & Angell, 1995). Similarly, old data that have been merely augmented with additional data points and that are subsequently presented as a new study can be an
equally serious ethical breach.

**Guideline 12:** Because some instances of plagiarism, self-plagiarism, and even some writing practices that might otherwise be acceptable (e.g., extensive paraphrasing or quoting of key elements of a book) can constitute copyright infringement, authors are strongly encouraged to become familiar with basic elements of copyright law.

**Guideline 13:** While there are some situations where text recycling is an acceptable practice, it may not be so in other situations. Authors are urged to adhere to the spirit of ethical writing and avoid reusing their own previously published text, unless it is done in a manner consistent with standard scholarly conventions (e.g., by using of quotations and proper paraphrasing).

**Guideline 14:** Authors are strongly urged to double-check their citations. Specifically, authors should always ensure that each reference notation appearing in the body of the manuscript corresponds to the correct citation listed in the reference section and vice versa and that each source listed in the reference section has been cited at some point in the manuscript. In addition, authors should also ensure that all elements of a citation (e.g., spelling of authors’ names, volume number of journal, pagination) are derived directly from the original paper, rather than from a citation that appears on a secondary source. Finally, authors should ensure that credit is given to those authors who first reported the phenomenon being studied.

**Guideline 15:** The references used in a paper should only be those that are directly related to its contents. The intentional inclusion of references of questionable relevance for purposes of manipulating a journal’s or a paper’s impact factor or a paper’s chances of acceptance is an unacceptable practice.

**Guideline 16:** Authors should follow a simple rule: Strive to obtain the actual published paper. When the published paper cannot be obtained, cite the specific version of the material being used, whether it is conference presentation, abstract, or an unpublished manuscript.

**Guideline 17:** Generally, when describing others’ work, do not rely on a secondary summary of that work. It is a deceptive practice, reflects poor scholarly standards, and can lead to a flawed description of the work described. Always consult the primary literature.

**Guideline 18:** If an author must rely on a secondary source (e.g., textbook) to describe the contents of a primary source (e.g., an empirical journal article), s/he should consult writing manuals used in her discipline to follow the proper convention to do so. Above all, always indicate the actual source of the information being reported.

**Guideline 19:** When borrowing heavily from a source, authors should always craft their writing in a way that makes clear to readers, which ideas are their own and which are derived from the source being consulted.

**Guideline 20:** When appropriate, authors have an ethical responsibility to report evidence that runs contrary to their point of view. In addition, evidence that we use in support of our position must be methodologically sound. When citing supporting
studies that suffer from methodological, statistical, or other types of shortcomings, such flaws must be pointed out to the reader.

**Guideline 21:** Authors have an ethical obligation to report all aspects of the study that may impact the independent replicability of their research.

**Guideline 22:** Researchers have an ethical responsibility to report the results of their studies according to their a priori plans. Any post hoc manipulations that may alter the results initially obtained, such as the elimination of outliers or the use of alternative statistical techniques, must be clearly described along with an acceptable rationale for using such techniques.

**Guideline 23:** Authorship determination should be discussed prior to commencing a research collaboration and should be based on established guidelines, such as those of the International Committee of Medical Journal Editors [www.icmje.org].

**Guideline 24:** Only those individuals who have made substantive contributions to a project merit authorship in a paper.

**Guideline 25:** Faculty-student collaborations should follow the same criteria to establish authorship. Mentors must exercise great care to neither award authorship to students whose contributions do not merit it, nor to deny authorship and due credit to the work of students.

**Guideline 26:** Academic or professional ghost authorship in the sciences is ethically unacceptable.
1930.5 Exploring the Alphabet Soup of Non-Monetary Agreements

Marjorie Forster, University of Maryland Baltimore, and Amanda Miller, University of Texas at Dallas

Historically when we, as Research Administrators, think about our chosen profession and all that it incorporates we mainly think about proposals, awards, and agreements that fund research projects. We think about submission deadlines, budget preparation, administrative forms and sponsored research agreements. Research is expensive. A university typically judges its success on the dollars its faculty brings in each year, and we work really hard helping our faculty seeking ways to fund their research. This is very logical. After all, the more money an institution brings in the more research they can perform.

However, it is also important to recognize the significance of non-monetary agreements and their role in supporting and protecting the research enterprise. We will demonstrate that failure to treat non-monetary agreements with the same degree of care may result in problems associated with obtaining and performing funded projects.

There are many different types of non-monetary agreements all of which support important functions of academic institutions. While this list certainly is not all-inclusive, these agreements may include:

◆ Confidential Disclosure Agreements (CDA)
◆ Consortium Agreements (CA)
◆ Data Use Agreements (DUA)
◆ Memorandum of Understanding (MOU)
◆ Material Transfer Agreements (MTA)
◆ Teaming Agreements (TA) and
◆ Visiting Scientist/Scholar Agreement (VSA)

The focus of this article is to outline the different types of non-monetary agreements and highlight the importance of each. We will discuss how non-monetary agreements facilitate the transfer of research materials between institutions and corporations; protect the exchange of confidential and proprietary information that allows for open discussion between researchers and potential collaborators and/or sponsors; allows the licensing of software or other tools needed for research; protects a party’s intellectual property, clearly maps out each party’s expectations prior to starting a project, and keeps each party aware of the type of entity with which they are working.

To put the drafting and negotiating of non-monetary agreements into perspective we should always keep in mind the mission of academic institutions which is to educate students, conduct unbiased research and investigations, and focus on freely creating, developing and disseminating new knowledge for the public good.
Confidential Disclosure Agreements

Confidential Disclosure Agreements (CDA) can also be referred to as Confidentiality Agreements (CA), Non-Disclosure Agreements (NDA), Proprietary Information Agreements (PIA), or Proprietary Disclosure Agreements (PDA). While these contracts have different names and acronyms, their function is largely the same: to allow for the exchange and protection of proprietary and/or confidential information (CI).

CDAs are legally binding agreements between at least two parties that outline the information they wish to share with each other, the boundaries imposed by both parties on the purpose and use of the exchange of information and/or materials, and also how to restrict from wider use and dissemination to third parties. CDAs are commonly executed when two parties are considering pursuing a relationship together and need to understand the other’s processes, methods, or technology solely for the purpose of evaluating the potential for a future relationship. For clinical trials, sponsors use CDA’s in order to provide the sponsor’s proprietary and confidential information. Another circumstance in which a CDA is used is when a corporation wants to evaluate a material when considering entering into a license agreement. If the parties decide to work with each other on a project, additional terms (such as a statement of work, ownership of intellectual property and licensing options, payment, etc.) will be outlined in a separate agreement, such as a Sponsored Research Agreement, a Collaborative Research Agreement, a Clinical Trial Agreement, or a License Agreement. CDAs also protect the ability of the owning party to patent an invention; something that can be compromised if a disclosure of the invention becomes public knowledge.

Important to keep in mind when reviewing a CDA:

◆ As with all agreements, it is important to clearly identify the parties entering into the contract, using proper legal names for each entity involved.
◆ It should be clear whether the CI will be exchanged mutually (two-way), or whether only your institution will be receiving or disclosing the CI (one-way).
◆ Ensure the date the CDA goes into effect (the “Effective Date”) is clearly defined and pre-dates any exchange of CI. Any information disclosed prior to the Effective Date of the CDA is not protected.
◆ It is important that the purpose of the CDA is clearly identified. Why are the parties exchanging information (i.e., to evaluate a possible research collaboration)? When the Purpose is clearly defined it can be used throughout the CDA terms to limit how the Receiving Party uses the CI. Examples of language using a clearly defined Purpose:
  ◆ The Receiving Party shall only use CI for the Purpose;
  ◆ Receiving Party shall restrict disclosure of the CI of the Owning Party solely to those employees of Receiving Party having a need to know such CI in order to accomplish the Purpose stated above;
  ◆ The definition of “Confidential Information” (CI) – should be explicit and should
not be overly broad so as to prevent discussion of an investigator’s research (e.g., “anything related to semiconductors”). It is important to have the CI disclosed in writing or summarized and reduced to writing and clearly marked as “Confidential”. This assures the Receiving Party is aware when items he/she receives need to be maintained per the terms of the CDA and prevents unintentional disclosures of CI to third parties. Avoid including in the definition anything obtained through observations while on the Disclosing Party’s property or in meetings with the Disclosing Party, as it is hard to quantify what someone else observes.

◆ Terms should outline who at the Receiving Party can access the CI. This typically is given on a need-to-know basis.

◆ The term of the agreement should be clearly defined and limited to only the time period the parties will be actively exchanging or evaluating CI. Typically, this will be a short period of time (1 – 3 years) depending on the Purpose for the exchange of information. For instance, a CDA for a research collaboration may have a term anywhere between 1-3 years, whereas for a CDA for a license agreement (simple evaluation of a material) is usually less than one year.

◆ The term for which the obligations of confidentiality remain (can be for longer than the term of the CDA, depending on the purpose of the sharing of the CI) should be clearly outlined. A party’s obligations should not be “indefinite.” No guarantees can be made that the CI disclosed will match the Receiving Party’s expectations or needs.

◆ No rights in the CI are granted to the Receiving party. The CI disclosed remains the sole property of the Disclosing Party.

If a CDA contains a defined statement of work or terms addressing generation of intellectual property, payment, publication rights, etc. talk to your faculty member to assess his/her needs. Another agreement may be more appropriate.

Consequences of not using a CDA:

◆ The Receiving Party can claim the Disclosing Party’s CI as its own.

◆ The Receiving Party can pass CI on to a third party.

◆ The Receiving Party can use CI for commercial purposes – especially problematic for a non-profit, public institution of higher education.

◆ The disclosure of information is considered a “public disclosure”, which can jeopardize potential patent rights.

In summary, CDAs protect information considered confidential or proprietary and give parties the freedom to evaluate possible collaborations. It is important to ensure the Effective Date of the contract predates any disclosure that needs to be protected.

For your convenience a sample CDA is provided.
Figure 1930.5-1. Confidential Disclosure Agreement

This non-disclosure agreement ("Agreement") entered into as of __________, 20___ (the "Effective Date") between The University of _________ located at [ADDRESS], ("University") and_____________ ("Company"), a corporation having a business address at_____________________ . University and Company may each be referred to as "Party" or collectively as the "Parties".

RECITALS

A. Company and University wish to exchange certain Confidential Information pertaining to___________. This exchange includes all communication of information between the parties in any form whatsoever, including oral, written and machine readable form, pertaining to the above.

B. University and Company wish to exchange the Confidential Information for the sole purpose of ___________ (the "Purpose") and each party regards certain parts of the Confidential Information it possesses to be secret and desires to protect those parts from unauthorized disclosure or use (such secret parts being hereafter collectively referred to as “Confidential Information”).

C. University and Company are willing to disclose Confidential Information (as “Owning Party”) and receive Confidential Information (as “Receiving Party”) on the terms and conditions set forth herein.

AGREEMENTS

Therefore, University and Company agree, as follows:

1. "Confidential Information" is proprietary and/or secret information owned or controlled by the Owning Party and which is discussed or disclosed during any meeting or discussions regarding the Purpose or otherwise disclosed in connection with the Purpose. Confidential Information includes, but is not limited to, all communications by Owning Party with the Receiving Party in any form whatsoever including oral, written and machine-readable form, video, audio, phonorecord, recorded media, drawings, schematics, samples, devices, software, formulas, biological materials, applications for intellectual property protection, services, processes, procedures, trade secrets, intellectual property, pricing, costs, business or strategic plans, and marketing or advertising strategies.

2. The Receiving Party shall only use Confidential Information for the Purpose. Specifically, but without limitation, the Receiving Party will not use any of the Confidential Information for any commercial purpose or development of any products or technology and shall not use or attempt to practice any invention arising from or disclosed in the Confidential Information, or any part thereof, without first entering into an agreement with the University permitting such use or practice.

3. The Confidential Information shall remain the sole property of the Disclosing Party.

4. Since the disclosure of Confidential Information by Disclosing Party is in strictest confidence, the Receiving Party covenants and agrees to:
   a. Not disclose to any other person the Confidential Information of Owning Party, and use at least the same degree of care and discretion to maintain the Confidential Information secret as the Receiving Party uses in maintaining as secret its own Confidential Information, but always at least a reasonable degree of care and discretion;
   b. Not disclose such Confidential Information to any third parties or use, duplicate, reproduce, copy, distribute, or otherwise disseminate such Confidential Information,
except as permitted pursuant to this Agreement;

c. Restrict disclosure of the Confidential Information of the Owning Party solely
to those employees of Receiving Party having a need to know such Confidential
Information in order to accomplish the Purpose stated above;

d. Advise each such employee, before he or she receives access to the Confidential
Information, of the obligations of Receiving Party under this Agreement, and require each
such employee to agree in writing to be bound by the terms of this Agreement, unless
such employee is automatically bound thereby as an employee of Receiving Party;

e. Within thirty (30) days following request of Owning Party, return to Owning Party
all documentation, copies, notes, diagrams, computer memory media and other
materials containing any portion of the Confidential Information, or confirm to
Owning Party, in writing, the destruction of such materials.

5. Nothing in this Agreement shall be interpreted as placing any obligation or expectation
of confidentiality or non-use on the part of the Receiving Party with respect to any
portion of the Confidential Information received from Owning Party that:

(a) can be demonstrated to have been in the public domain as of the date of this
Agreement, or comes into the public domain during the term of this Agreement
through no fault of the Receiving Party;

(b) can be demonstrated by tangible evidence to have been known to Receiving Party
prior to disclosure by Owning Party and as to which the Receiving Party has no
obligation not to disclose or use it;

(c) is lawfully obtained by Receiving Party from a third party under no obligation of
confidentiality, and who did not acquire it, directly or indirectly, from the Owning
Party under a continuing obligation of confidentiality;

(d) can be demonstrated by tangible evidence to have been independently developed
by Receiving Party without a violation of this Agreement and without use of or
reference to the Owning Party’s Confidential Information;

(e) is generally disclosed by Owning Party to third parties without a duty of
confidentiality on the third parties; or

(f) is disclosed as required by law.

In the event any Confidential Information is required to be disclosed pursuant to governmental
law, regulation, or judicial or administrative proceeding, Receiving Party shall provide prompt notice
of such request to the Owning Party and shall cooperate fully in seeking a protective order or other
assurance that confidential treatment will be accorded to the Confidential Information required to be
disclosed, should Owning Party seek such order or assurance. In the event that such protective order or
other remedy is not obtained, or that the Owning Party waives compliance with the provisions hereof,
Receiving Party and its employees and agents agree to furnish only that portion of the Confidential
Information of Owning Party which is legally required to be furnished. Furthermore, such Confidential
Information shall continue to be considered and treated by the Receiving Party as Confidential
Information for all other purposes. Confidential Information required to be so disclosed shall not be
deemed part of the public domain by virtue of such disclosure.
6. This Agreement imposes no obligation on Receiving Party with respect to any portion of the Confidential Information disclosed by the Owning Party, unless such portion is:

(a) disclosed in a written document or machine readable media marked “CONFIDENTIAL” at the time of disclosure, or

(b) disclosed in any other manner and summarized in a memorandum mailed to Receiving Party within thirty (30) days of the disclosure.

Confidential Information disclosed by Owning Party in a written document or machine readable media and marked “CONFIDENTIAL” includes, but is not limited to, the items, if any, set forth in Schedules A and B attached hereto. Schedules A and B are incorporated herein by reference. Receiving Party hereby acknowledges receipt of the items listed in Schedules A and B, if any.

7. NEITHER OWNING PARTY MAKES ANY REPRESENTATION WITH RESPECT TO AND DOES NOT WARRANT ANY INFORMATION PROVIDED UNDER THIS AGREEMENT, BUT SHALL FURNISH SUCH IN GOOD FAITH. WITHOUT restricting the generality of the foregoing, NEITHER OWNING PARTY MAKES ANY REPRESENTATIONS OR WARRANTIES, WHETHER WRITTEN OR ORAL, STATUTORY, EXPRESS OR IMPLIED WITH RESPECT TO THE INFORMATION WHICH MAY BE PROVIDED HEREUNDER, INCLUDING WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. NEITHER OWNING PARTY SHALL BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE WHATSOEVER RESULTING FROM RECEIPT OR USE OF THE INFORMATION BY THE RECEIVING PARTY.

8. The Receiving Party shall comply with all applicable federal, state and local laws and regulations in connection with its activities pursuant to this Agreement, including United States laws and regulations controlling the export of materials and information including technical data, drawings, know-how, computer software, laboratory prototypes and other items.

9. In the event of a breach or threatened breach or intended breach of this Agreement by either Party, the other Party, in addition to any other rights and remedies available to it at law or in equity, shall be entitled to seek preliminary and final injunctions, enjoining and restraining such breach or threatened breach or intended breach, or requiring specific performance of the Party’s obligations hereunder, even if monetary damages are available and readily quantifiable and without proof of actual damage.

10. The validity, construction, and performance of this Agreement are governed by the laws of the State of _______, and the Parties hereby consent to jurisdiction in such courts.

11. If any mediation, litigation or other legal proceeding relating to this Agreement occurs, the prevailing party shall be entitled to recover from the other party (in addition to any other relief awarded or granted) its reasonable costs and expenses, including attorney’s fees, incurred in the proceeding.

12. The rights and obligations of the Parties under this Agreement may not be sold, assigned or otherwise transferred. This Agreement shall not be amended or modified
without mutual consent of the Parties to such amendment or modification.

13. Neither Party may use the other Party’s name without prior written consent.

14. Either Party may terminate this Agreement at any time without cause upon thirty (30) days written notice to the other Party, or for cause effective upon written notice to the other Party.

15. LIMITATIONS. COMPANY AND UNIVERSITY AGREE THAT THERE ARE CONSTITUTIONAL AND STATUTORY LIMITATIONS ON THE AUTHORITY OF UNIVERSITY (A ______ STATE AGENCY) TO ENTER INTO CERTAIN TERMS AND CONDITIONS THAT MAY BE A PART OF THIS AGREEMENT. ACCORDINGLY, THE TERMS AND CONDITIONS OF THIS AGREEMENT ARE ONLY BINDING ON UNIVERSITY TO THE EXTENT AUTHORIZED BY THE LAWS OF THE STATE OF ______. Company and University specifically agree that (i) neither the execution of this Agreement by University nor any other conduct, action or inaction of any representative of University relating to this Agreement constitutes or is intended to constitute a waiver of University’s or the state’s sovereign immunity to suit and (ii) University has not waived its right to seek redress in the courts.

16. This Agreement is binding upon both Company and University and upon the directors, officers, employees and agents of each. This Agreement is effective as of the Effective Date and will continue for a period of three (3) years, unless earlier terminated as provided herein. However, Receiving Party’s obligations of confidentiality and restrictions on use of the Confidential Information disclosed by Owning Party, and all related remedies for breach thereof, shall survive expiration or termination of this Agreement.

17. This Agreement constitutes the entire and only agreement between the Parties for the confidentiality of Confidential Information related to the Purpose. Nothing herein requires either Party to proceed with any proposed transaction or relationship in connection with which the Confidential Information may be disclosed.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their duly authorized representatives.

The University of ______________________
By:____________
Name:____________
Title:____________
Date:____________

(Company)
By:____________
Name:____________
Title:____________
Date:____________
Consortium Agreements
A consortium is essentially a partnership – one or more institutions joining forces to accomplish a common goal. Universities can pool their scientific, organizational, and educational resources to build collaborative research centers, educational programs for students, or community outreach programs. A Consortium Agreement is the contractual vehicle that establishes the fundamental rules of the partnership and ensures all parties have a common understanding of the structure, purpose and goals of their union. Consortium collaborations may involve various types of institutions including academic institutions, foundations, government, and for-profit entities. Depending upon the type of project and the composition of the consortium members will determine which terms are appropriate for the project. There are several types of consortium collaborations: 1) a corporate sponsored and funded membership consortium that attracts academic institutions with an area of expertise in which corporate/industrial sponsors are interested. The academic institutions focus on the consolidation and pooling of its resources including non-financial (faculty expertise, graduate students, entrepreneurial skills, etc.) to build a research center to conduct different research projects focused on a particular field of concentration; and 2) a consortium collaboration that is developed in response to a funding opportunity that requires the consortium agreement be put in place in order to outline the terms of engagement of all the participating entities.

When reviewing Consortium Agreement it is important to keep in mind the following:
◆ While multiple institutions are involved, one university will serve as the lead institution to manage the administrative or organizational aspects of the partnership.
◆ The agreement should clearly define the purpose of the collaboration and outline the following basic issues:
  ◆ Governance – how will decisions related to the consortium be made? Typically this is through creation of an advisory board made up of representatives of each of the university partners, who vote on issues. It is important that each university is represented and has the ability to weigh in on issues and decisions.
  ◆ Dispute resolution – as with any collaboration, there is the possibility of disputes arising. It is important to have a plan clearly in place for how the parties will proceed should issues arise.
  ◆ Funding – how will the consortium be funded? Is this internal support from the partnering institutions – each institution covering its own expenses – or does the partnership need outside sponsors to fund the program? If outside funding is involved, how will the monies be divided among the university partners?
  ◆ Intellectual Property (IP) – If generation of IP is anticipated, it is important to define IP and outline how rights in IP will be managed. Each university
partner should have the right to use Consortium IP generated for its own internal research and training use but not for commercial purposes.

◆ Publication rights should be addressed when research projects are involved. It is important to allow all collaborating universities to have prior review of publications, however this prior review should be limited to not unnecessarily delaying or preventing publication. This is especially important if students are involved who may need to publish results to complete their degree programs.

◆ Term – the term of the partnership should be clearly defined and should be appropriate for the nature of the partnership.

◆ Termination rights should be clearly outlined as well as how/when the partnership will end. Consideration should be given to how to add a new consortium member or drop an existing member.

In summary, a Consortium Agreement allows two or more institutions to accomplish programs and partnerships that individually they may not have the resources to effectively achieve on their own. The Consortium Agreement maps out the rules and terms of the partnership for the universities to work together to build educational and exploratory opportunities to benefit students and society at large.

For your convenience a sample Consortium Agreement is provided.

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**Figure 1930.5-2. Consortium Agreement**

Consortium Agreement Between

____________________ and __________________

This Consortium Agreement ("Agreement") is effective this ___ day of __________ (the "Effective Date"), by and between ________________ (hereinafter referred to as "_____") and ______________ (hereinafter referred to as "_____") and such other non-profit universities as may have executed the Instrument of Adherence attached hereto as Schedule A upon mutual agreement of the parties, to be known collectively hereinafter as "Institutions" or individually as an "Institution."

Whereas, the parties to this Agreement have each received or will be receiving funding to support the National Science Foundation Industry/University Cooperative Research Center for ______________ (hereinafter referred to as "Center") in its efforts to perform research to _____________________________ _______.

Whereas, the activities of Center are funded by (i) the National Science Foundation (hereinafter referred to as "NSF"), (ii) members from industry (hereinafter referred to as "Members"), (iii) direct budgetary support from the Institutions and (iv) other funds that may be received from time to time.

Whereas, Institutions are desirous of formalizing certain agreements between them with respect to the subject matter contained herein.

Now therefore, for and in consideration of the mutual promises and covenants herein contained Institutions hereto agree as follows:

1. Center Governance.
   a. The Center will have a common Institutional Advisory Board ("IAB") composed of a
representative of each Member and each Institution; an Academic Advisory Committee and a Research Advisory Committee. Each Institution shall use a common format for its membership agreement, which shall be substantially in the form of the Membership Agreement as set forth in Schedule B (“Membership Agreement”). Institution may make changes to the Membership Agreement insomuch as said changes do not affect Members’ rights as provided in Schedule B. Changes made to the Membership Agreement must be submitted in writing and agreed upon by the Institutions and NSF. No response by recipient Institution(s) within a 30-day period from receipt of suggested changes will indicate automatic approval by the recipient Institution(s).

b. In accordance with the NSF award, the Center Director will be from ______________________. Each Institution shall select a Site Director in accordance with the policies and procedures of each Institution.

2. Center Funding.

a. During the first five-year period of the Center, each Institution will receive its own funds directly from NSF, will be responsible for recruiting its own Members, and will retain membership fees collected from its Members. Institution may be directed by the IAB to allocate a portion of the membership fees collected to inter-institutional collaborative research between the Institutions. The expectation is that inter-institutional collaborative research projects will constitute approximately __% of Center funds on average, annually.

b. Institutions shall jointly pay (in equal shares) for major promotional Center materials, such as brochures, provided however, that each Institution’s obligation hereunder shall only apply to promotional materials that have been produced with the advance written approval of all participating Institutions.

c. Within each Institution, a separate internal account shall be set up for the operation of the Center. The Director and each Site Director must provide an annual budget based on expected income from all sources to the respective Institution. These budgets should be made available to the Center Director, the Site Director of the Center and the responsible university officials of such Institution by _____ of each year.

3. Ownership and Administration of Intellectual Property. “Invention” means any invention or discovery which is or may be patentable or otherwise protectable under Title 35 of the United States Code or which may be copyright protected under Title 17 of the United States Code) that results from work sponsored by Center funds developed by the Institution or Institutions (collectively “Intellectual Property”). Institutions shall maintain records of all Center-funded work, including project titles, primary Institution, and primary investigators. Subject to the rights of Members contained in Schedule B, all right, title, and interest in and to all Intellectual Property shall be allocated as follows:

a. Solely Owned Institution Intellectual Property. All Intellectual Property developed or invented by inventors solely at one Institution shall belong solely to that Institution (“Institution Intellectual Property”).

b. Jointly Owned Institution Intellectual Property. All Inventions invented jointly by personnel of two or more Institutions will belong jointly to each Institution whose employees are named inventors (“Joint Institution Intellectual Property”). In each such case, the technology transfer offices of the Institutions jointly owning the Intellectual Property shall agree which Institution shall be the lead Institution for commercialization purposes. After identifying the Institution that will administer the Joint Institution Intellectual Property, the relevant Institutions shall negotiate in good faith an Intellectual Property Agreement, which agreement shall contain, inter alia, terms and conditions concerning the sharing of royalties and costs associated with the Joint Institution Intellectual Property, and providing
for sharing information related to the Intellectual Property and commercialization efforts. Regarding any such information received by either Institution with regards to the Intellectual Property, the receiving Institution shall use reasonable efforts to limit dissemination pending the determination and/or filing of intellectual property protections.

c. Disclosure and Intellectual Property Protections. Each Institution shall be responsible for the identification and evaluation of its sole Institution Intellectual Property and for informing all Members regarding Institution Intellectual Property as outlined in the Membership Agreement. If Members and the inventing Institution(s) agree that patent protection should be sought and if Members are interested in securing such protection, the Members will follow the process outlined in Schedule B. If Members do not notify the Institution in writing that the Members are not interested in procuring protection for the Intellectual Property within sixty (60) days from the date of disclosure, the inventing Institution(s) may determine on its/their own whether protection will be sought, and such Institution(s) may dispose of the Intellectual Property.

d. Institutions having an ownership interest in Joint Institution Intellectual Property shall jointly review any Joint Institution Intellectual Property, evaluate its commercial potential and inform Members regarding the Joint Institution Intellectual Property as outlined in Schedule B. If Members and Institutions agree that patent protection should be sought and if Members are interested in procuring protection for such Joint Institution Intellectual Property, Institutions will manage the Joint Institution Intellectual Property according to the terms of the applicable Intellectual Property Agreement agreed to by the Institution.

4. License to Use Intellectual Property for Internal Use. With respect to Institution generated Intellectual Property belonging solely to an Institution, such Institution agrees to and does hereby grant to the other Institution, subject to the terms of this Agreement, a nonexclusive, nontransferable, irrevocable, royalty free license for internal, educational and noncommercial research purposes only (without the right to sublicense). This license shall include the right to utilize any information and materials published by Center. Institutions acknowledge that a separate license agreement may be required by the licensing Institution in order to convey the rights granted by this paragraph.

5. Publication of Joint Institution Intellectual Property. Each Institution with an ownership interest in Joint Institution Intellectual Property shall have the right to publish research resulting from development of such Intellectual Property. The Institution desiring to publish such research results shall submit a draft of any such proposed publication to the other Institution holding ownership interests at least twenty (20) days prior to the submission of the research results for publication. The non-publishing Institution shall have the right to delay any publication involving its Joint Institution Intellectual Property for a period of not more than sixty (60) days for the purposes of obtaining patent protection by giving the publishing Institution written notice before the end of twenty (20) days notice period provided herein. For the purposes of this Agreement, cataloging and placing reports of research results in the library of any Institution where such results are available to third parties shall be deemed to be a “publication.”

   a. This Agreement may not be amended or modified except by the execution of a written instrument executed by the parties hereto.
   b. In the event that any of the terms, provisions, or covenants contained in this Agreement are held to be partially or wholly invalid or unenforceable for any reason whatsoever, such holding shall not affect, alter, modify, or impair in any manner whatsoever any of the other terms, provisions, or covenants not held to be partially or wholly invalid or unenforceable.
7. Term. The term of this Agreement will be from Effective Date and shall continue for the duration of the Center contract with NSF.

8. Counterparts. This Agreement, Schedule A and Schedule B hereto may be executed in any number of counterparts and by any party on separate counterpart, each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

9. Entire Agreement. The Agreement is the entire agreement between the parties regarding the subject matter of this Agreement and it supersedes any prior agreements, understanding or discussions with respect to such subject matter.

In witness whereof, Institutions hereto have caused this Agreement to be duly executed by their duly authorized officers as of the day and year set forth next to each signature.

_______________________________________
By: _________________________________
Name: _________________________________
Title: _________________________________
Date: _________________________________

_______________________________________
By: _________________________________
Name: _________________________________
Title: _________________________________
Date: _________________________________

SCHEDULE B

Industry/University Cooperative Research Center for ____________________

Membership Agreement

This Membership Agreement (“Agreement”) is made this __________ day of ______, 20____ (the “Effective Date”) by and between ___________________, (hereinafter called “UNIVERSITY”) and _______________________ (hereinafter called “COMPANY”), for the Center comprising and acting through the Center for ___________________, which is defined as all _________ Research Sites funded by the Industry/University Cooperative Research Center Program of the National Science Foundation.

WHEREAS, _______________________ (_____) and University (hereinafter collectively called the “Collaborating Universities”) have entered into a Consortium Agreement (“CA”), a copy of which is attached hereto as Exhibit A, in a cooperative effort to establish and support an Industry/University Cooperative Research Center for ___________________ (hereinafter called “Center”). The parties to this Agreement intend to join together in a cooperative effort to support the Center at the Collaborating Universities to maintain a mechanism whereby the Collaborating Universities environment can be used to perform research to enhance the national excellence in ________________________________________.

The parties hereby agree to the following terms and conditions:

A. Center will be operated by certain faculty, staff and students at the Collaborating Universities. For the first five years, the Center will be supported jointly by industrial firms, Federal laboratories, the National Science Foundation (NSF), the State, and the Collaborating Universities. It is possible that the
Collaborating Universities may receive support from NSF for an additional ten (10) years.

B. Any company may become a sponsor of the Center, consistent with applicable state and federal laws and statutes. Any Federal Research and Development organization or any Government-owned Contractor Operated laboratory may become a sponsor of the Center.

C. Company agrees to the following level of membership and shall contribute: (check one)
   ___ Full Member: $_______ annual fee
   ___ Small Business Associate Member (“SBA Member”): $_______ annual fee

“Member” or “Members” means one or more of any of the Full Members or SBA Member. For Company to qualify for the reduced SBA Member fee, Company must qualify as a small business by the current definitions issued by the U.S. Small Business Administration.

Payment of these annual membership fees shall be made as a lump sum effective May 1 of each annual period; or in four (4) equal quarterly installments on May 1, August 1, November 1, and February 1, of each year of sponsorship. These membership fees will be increased by __%, beginning in _______, and every third year thereafter. Checks from Company should be mailed to:

Name:
Address:

and made payable to ________________________. Since research of the type to be performed by the Center takes time, and research results may not be obvious immediately, Company should join Center with the intention of remaining a fee paying member for at least two (2) years. However, Company may terminate this Agreement by giving University ninety (90) days prior written notice. Termination or cancellation of this Agreement shall not affect the rights and obligations of the parties accrued prior to termination. Fees paid by Company as a Member are not refundable.

D. There will be an Industrial Advisory Board (IAB) composed of one (1) representative from each Member. This board votes and makes recommendations on (a) the research projects to be carried out by Center (b) the apportionment of resources to these research projects, and (c) changes in the bylaws. Each Industrial Member will count as eight (8) votes and each SBA Member will count as three (3) votes. The organization and operation of the Center will be specified by Center bylaws that will be adopted during the first year of Center operation. The bylaws, when adopted, will become part of this agreement and will be located at the following website: www.uml.edu/windstar.

E. University reserves the right to publish in scientific or engineering journals the results of any research performed by Center. Company, however, shall have the opportunity to review any paper or presentation containing results of the research program of Center prior to publication of the paper, and shall have the right to request a delay in publication for a period not to exceed ninety (90) days from the date of submission to Company, provided that Company makes a written request and justification for such delay within thirty (30) days from the date the proposed publication is submitted by certified mail or electronic mail with notification receipt to Company.

F. All patents, inventions, discoveries, technology, software and tangible materials conceived or first actually reduced to practice in the course of research conducted by the Center (“Intellectual Property”) shall be owned by Collaborating Universities in accordance with the CA. University, pursuant to chapter 18 of title 35 of the United States Code, commonly called the Bayh-Dole Act (“Act”), will have ownership of all inventions developed from this work conducted in accordance with the CA.

G. University agrees that each Member is entitled to a non-exclusive, royalty-free license to use Intellectual Property arising during such Member’s participation in the Center. While designated as a Member, Company will have the right to sublicense such use to its subsidiaries and affiliates.
Members that wish to exercise rights to a non-exclusive royalty-free license shall pay associated patent expenses and/or other reasonable costs of protecting licensed Intellectual Property. Such patent or other reasonable costs shall be shared equally by all Members electing a nonexclusive license.

H. If Company is the sole Member seeking a license, Company may negotiate an exclusive fee-bearing license from University. The terms of such license shall be commercially reasonable and shall provide for diligent development of the Intellectual Property towards commercialization by Member. Such Member shall have the right to sublicense to its subsidiaries and affiliates.

I. Copyright registration shall be obtained for software developed by Center. Each Member shall be entitled to a nonexclusive, royalty-free license to all software developed by Center during such Member’s membership to the Center. Members will have the right to enhance and to re-market enhanced software with royalties due to Center to be negotiated, based on the worth of the initial software, but not to exceed __% of a fair sale price of the software product sold or licensed by such Member.

J. Any royalties and fees received by University under this Agreement, over and above expenses incurred, will be distributed according to University policy.

K. Neither party is assuming any liability for the actions or omissions of the other party. To the extent allowed by law, each party will hold the other party harmless against all claims, liability, injury, damage or cost based upon injury or death to persons, or loss of, damage to, or loss of use of property that arises out of the performance of this agreement to the extent that such claims, liability, damage, cost or expense results from the negligence of a party’s agents or employees.

L. Limitation of Remedies. The obligations of University are set forth in this agreement and are in substitution for all other warranties, obligations and liabilities. There are no warranties, expressed or implied, arising by law or otherwise, including but not limited to, any implied warranty arising from course of performance, course of dealing or usage of trade. In no event shall University be liable for any indirect, incidental or consequential damages.

M. Non-Waiver. University is an agency of the State of _____ and nothing in this Agreement waives or relinquishes the right of University to claim any exemptions, privileges, and immunities as may be provided by law.

IN WITNESS WHEREOF, the University and Company have caused this Membership Agreement to be executed by their respective duly authorized officers:

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<thead>
<tr>
<th>UNIVERSITY</th>
<th>COMPANY</th>
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<td>Name</td>
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Data Use Agreements

Sharing data is essential when conducting research. Not only does it encourage collaboration and diverse thinking, but it also enables researchers to re-create a certain study and validate its results. Typically data are shared through public disclosure such as journal publications or conference presentations. However, there are certain types of data sets that are not accessible or part of the public domain - for example a hospital’s identifiable patient records, state health department data sets, for-profit entity clinical trial data sets, or institution’s confidential or proprietary data sets. In order to gain access to these data, such exchanges are authorized by entering into a Data Use Agreement (DUA).

A DUA is a formal agreement between two or more institutions that clearly outlines the type of data exchanged and defines how the data can be accessed, stored, and used. The DUA protects the Disclosing Party and restricts the Receiving Party from unauthorized release of the data to third parties and provides a clear understanding of the terms of data use.

While a Confidential Disclosure Agreement (CDA) also allows for the exchange of confidential or proprietary information, it is important to keep in mind the key difference: a CDA allows for parties to evaluate a possible collaboration while the DUA allows for the use of data in active research projects.

Important items to keep in mind while reviewing a DUA:

◆ The parties entering into the Agreement need to be clearly defined, using their full legal names. It is important to confirm the party releasing data is the owner of the data and is authorized to provide the access outlined in the terms of the Agreement. A statement to this effect is often included in the Agreement’s terms.

◆ The term of the Agreement and period under which the data are authorized for use should be defined. It is important to know what happens to the data once the terms of the Agreement expires, whether the data need to be returned to the Disclosing Party or whether the data should be destroyed. Some entities may request written certification of destruction if they do not wish the data be returned.

◆ Definitions for “research project”, “data set”, and “recipient” may be considered.

◆ The authorized use of the data should be clearly outlined and specific. For universities, on both incoming and outgoing DUAs, use should be restricted to research and/or education purposes only.

◆ Personnel authorized to use the data should be identified and included in the DUA. This can include specific names of individuals or can be limited to a need-to-know basis. Do all individuals allowed access to the data have the same level of access?

◆ How will the information need to be stored? It is important to verify the data’s security can be maintained in compliance with applicable laws and regulations. For instance, a non-medical institution may not have the infrastructure to comply with HIPAA regulations. It is always good to check with your Information Security Office to verify your institution has the capabilities to keep the data
secure and comply with the terms of the Agreement. If your institution cannot securely store identifiable information, can the provider de-identify the data prior to release? If you do not need identifiable information, do not request it.

◆ How will the data be transferred from the provider to the user? Will it be transferred electronically or will a hard copy be provided? If there are expenses related to the transfer of data, which party is responsible for these costs?

◆ The DUA is not transferable. For example, any major changes to the original purpose or change in Principal Investigator would require the execution of a new DUA. The data will not be used in any research that is not disclosed and approved as part of the original Research Project.

◆ If an unintended breach of security occurs, the owning party should be notified as soon as possible upon the Receiving Party’s discovery of the breach. A clear course of action should be outlined to resolve such unintended breach.

◆ If the authorized use of the data results in a paper or report, ownership of the research results will vest in the Receiving Party of the data set. However, ownership of the original data set itself will always vest with the Disclosing Party.

◆ Publication: should be authorized subject to the provider’s prior review. This review is simply to verify none of their confidential information is included to prevent public disclosure. The prior review time period needs to be limited to prevent unnecessary delays in publication, especially if students are involved in the research project.

◆ Verify the person signing on behalf of each institution is authorized to do so and bind their institution to the terms of the Agreement. A Principal Investigator should never sign an agreement on behalf of his/her institution unless they have been delegated this authority by the proper institutional officials.

For access to special data sets, for example Medicaid data, special terms and conditions in these types of agreements may be requested to ensure the protection of personal and medical information and data.

◆ Provide a copy of IRB approval

◆ Provide periodic reports if any changes are made to the original scope of work

◆ For all publications acknowledge the contribution and provision of the data set received from the agency

◆ For any publication, report, article, written or oral presentation, written analysis, or similar document that makes reference to the data, the agency providing the data set should be provided with a copy prior to submission.

◆ Without express written authorization the recipient agrees not to attempt to link records included in the file(s) to any other individual-specific source of information

◆ Should there be an inadvertent disclosure of the material it is important to immediately notify the provider.
In summary, a DUA allows a faculty member at an institution to access data he/she may not otherwise have access to, such as patient data or a company’s proprietary information. It is essential to understand the security requirements required and verify you are capable of meeting those requirements to ensure the data remains secure.

A sample DUA is provided for your convenience.

Figure 1930.5-3. Data Use Agreement

This Data Use Agreement ("Agreement"), effective as of the __ day of ____, 2015 ("Effective Date"), is by and between The University of ____________ Center, with an address at ____________ ("Covered Entity") and The University of ____________, with an address at ____________ ("Recipient") (collectively, the "Parties"; each, a "Party") for purposes of complying with the federal Standards for Privacy of Individually Identifiable Health Information set forth at 45 C.F.R. Parts 160 and 164 (the "Privacy Standards").

RECITALS

Recipient would like to use certain health information maintained by Covered Entity as described on Exhibit “A” attached to this Agreement and incorporated herein by reference ("Data") for purposes of _______________ ("Purpose").

Recipient recognizes that Covered Entity is a covered entity under the Administrative Simplification provisions of the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") and that Covered Entity is required by the Privacy Standards adopted pursuant to HIPAA to protect the privacy of the individually identifiable health information maintained by Covered Entity.

45 C.F.R. § 164.514(e) of the Privacy Standards permits Covered Entity to disclose a “Limited Data Set” of health information to Recipient for purposes of health care operations, research, or public health if Recipient enters into a “Data Use Agreement” with Covered Entity, containing adequate assurances from Recipient that Recipient shall comply with certain obligations with respect to such Limited Data Set.

This Agreement constitutes a Data Use Agreement under 45 C.F.R. § 164.514(e) and is intended to comply with the Privacy Standards as may be amended from time to time.

In consideration of the mutual promises and covenants herein, and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties agree as follows:

A. Definitions.

1. **Breach.** "Breach" means the unauthorized acquisition, access, use, or disclosure of Unsecured Protected Health Information ("PHI") in a manner not permitted under the Privacy Standards that poses more than a low probability that the PHI has been compromised. The Covered Entity determines whether a Breach has occurred.

2. **Covered Entity.** "Covered Entity" means The University of ____________.

3. **Health Care Operations.** "Health Care Operations" means any of the activities specified at 42 C.F.R. § 164.501 under the definition of "health care operations", to the extent that such activities are performed by the Recipient.

4. **Individual.** "Individual" means the person who is the subject of the Protected Health Information.
5. **Limited Data Set.** “Limited Data Set” means PHI that excludes the following direct identifiers of the individuals or of the relatives, employers, or household members of individual: (i) names; (ii) postal address information, other than town or city, state and zip code; (iii) telephone numbers; (iv) fax numbers; (v) electronic mail addresses; (vi) social security numbers; (vii) medical record numbers; (viii) health plan beneficiary numbers; (ix) account numbers; (x) certificate/license numbers; (xi) vehicle identifiers and serial numbers, including license plate numbers; (xii) device identifiers and serial numbers; (xiii) web universal resource locators (URLs); (xiv) Internet Protocol (IP) address numbers; (xv) biometric identifiers, including finger and voice prints; (xvi) full face photographic images and any comparable images.


7. **Protected Health Information or PHI.** “Protected Health Information” or “PHI” means individually identifiable health information regardless of the form in which it is maintained or transmitted.

8. **Public Health.** “Public Health” refers to the activities specified in 42 C.F.R. § 164.512(b).

9. **Recipient.** “Recipient means The University of _____________.

10. **Required by Law.** “Required by Law” means a mandate contained in law that compels a use or disclosure of PHI and that is enforceable in a court of law.

11. **Research.** “Research” means a systematic investigation, including research development, testing, and evaluation, designed to develop or contribute to generalizable knowledge.

**B. Creation and Disclosure of Limited Data Set.** Covered Entity may use PHI to create a Limited Data Set and may disclose the Limited Data Set to Recipient solely for the Purpose.

**C. Recipient Obligations Regarding the Limited Data Set.** As a condition of receiving the Limited Data Set, Recipient agrees to comply with all applicable federal and state privacy and security laws. Recipient further agrees:

1. not to use or disclose the Limited Data Set except as necessary to fulfill the Purpose;
2. not to use or further disclose the Limited Data Set in a manner that would violate the Privacy Standards if done by Covered Entity;
3. not to use or further disclose the Limited Data Set other than as permitted by this Agreement or otherwise Required by Law;
4. to use appropriate safeguards to prevent use or disclosure of the Limited Data Set other than as permitted by this Agreement;
5. to immediately report to Covered Entity any use or disclosure of the Limited Data Set not permitted by this Agreement of which Recipient becomes aware, including any unauthorized acquisition of computerized data that compromises the security, confidentiality, or integrity of information in the Limited Data Set. If any unanticipated
use or disclosure of the Limited Data Set occurs, Recipient shall cooperate and assist
Covered Entity in determining, in an expedited manner, the date, nature, content, and
extent of such unanticipated use or disclosure. In the event that the Covered Entity
determines that the unanticipated use or disclosure of the Limited Data Set constitutes
a Breach, Recipient shall cooperate and assist Covered Entity with the breach reporting
process in the manner requested by the Covered Entity;

6. to ensure that any agents to whom it provides the Limited Data Set agree to the same
restrictions and conditions that apply to the Recipient with respect to the Limited Data
Set; and

7. not to identify any Individuals or contact such Individuals.

D. Term and Termination.

1. Term. This Agreement shall be effective as of the Effective Date and shall remain
effective for one (1) year. The Parties may extend the Agreement term upon written
amendment, and either Party may terminate this Agreement with or without cause
upon thirty (30) days’ written notice to the other Party.

2. Termination for Breach. If Recipient breaches any provision in this Agreement, Covered
Entity may, at its option, access and audit the records of Recipient related to its use
and disclosure of the Limited Data Set, require Recipient to submit to monitoring and
reporting, and such other conditions as Covered Entity may determine is necessary
to ensure compliance with this Agreement, or Covered Entity may terminate this
Agreement as of any date specified by Covered Entity.

3. Continued Confidentiality of Information. After the termination of this Agreement,
Recipient shall return or destroy the Limited Data Set, if it is feasible to do so. If it is not
feasible to do so, Recipient agrees to maintain the confidentiality of the Limited Data
Set as set forth in this Agreement and the HIPAA Privacy Standards.

E. Miscellaneous.

1. Indemnification. To the extent authorized under the Constitution and laws of the State
________, each Party shall indemnify, defend and hold harmless the other Party and its
employees, directors, officers, subcontractors, agents or other members of its workforce,
each of the foregoing an “Indemnified Party,” against all actual and direct losses
suffered by the Indemnified Party and all liability to third parties arising from or in
connection with such Party’s: (a) breach of this Agreement; (b) breach of any warranty
hereunder; or (c) negligence or wrongful acts or omissions, including failure to perform
its obligations under the Privacy Rule.

The indemnities set forth in this Section E(1) shall survive termination of this Agreement.
Covered Entity reserves the right, at its option and expense, to participate in the
defense of any suit or proceeding with respect to this Agreement through counsel of its
own choosing.

2. Rights of Proprietary Information. Covered Entity retains any and all rights to the
Limited Data Set and any other confidential or proprietary information that Covered
3. **Notices.** Any notices pertaining to this Agreement shall be given in writing and shall be deemed duly given when personally delivered to a Party or a Party’s authorized representative as listed below or sent by means of a reputable overnight carrier, or sent by means of certified mail, return receipt requested, postage prepaid. A notice sent by certified mail shall be deemed given on the date of receipt or refusal of receipt. All notices shall be addressed to the appropriate Party as follows:

If to Covered Entity:

**Notice should be given to:**

Name:
Address:
Attn:
Phone:

If to Recipient:

Name:
Address:
Attn:
Phone:

4. **Amendments.** This Agreement may not be changed or modified in any manner except by an instrument in writing signed by a duly authorized officer or representative of each of the Parties hereto. The Parties, however, agree to amend this Agreement from time to time as needed to assure compliance with the Privacy Standards.

5. **Choice of Law.** This Agreement and the rights and the obligations of the Parties hereunder shall be governed by and construed under the laws of the State of______, without regard to applicable conflict of laws principles. Covered Entity, as an agency of the State of______, is subject to the Constitution and laws of the State of______, and nothing in this Agreement shall constitute or be construed as a waiver of the sovereign immunity of the State of______ or a waiver, limitation, or restriction of any right of the State of______.

6. **Assignment of Rights and Delegation of Duties.** This Agreement is binding upon and inures to the benefit of the Parties hereto and their respective successors and permitted assigns. However, neither Party may assign any of its rights or delegate any of its obligations under this Agreement without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed. Notwithstanding any provisions to the contrary, however, Covered Entity retains the right to assign or delegate any of its rights or obligations hereunder to any of its wholly owned subsidiaries, affiliates or successor companies. Assignments made in violation of this provision are null and void.

7. **Nature of Agreement.** Nothing in this Agreement shall be construed to create: (i) a
partnership, joint venture, or other joint business relationship between the Parties or any of their affiliates; (ii) any fiduciary duty owed by one Party to another Party or any of its affiliates; or (iii) an agency or employment relationship between the Parties or any of their affiliates.

8. **No Waiver.** Failure or delay on the part of either Party to exercise any right, power, privilege or remedy hereunder shall not constitute a waiver thereof. No provision of this Agreement may be waived by either Party except by a writing signed by an authorized representative of the Party making the waiver.

9. **Equitable Relief.** Any disclosure or misappropriation of the Limited Data Set by Recipient in violation of this Agreement shall cause Covered Entity irreparable harm, the amount of which may be difficult to ascertain. Recipient, therefore, agrees that Covered Entity shall have the right to apply to a court of competent jurisdiction for specific performance and/or an order restraining and enjoining Recipient from any such further disclosure or breach and for such other relief as Covered Entity shall deem appropriate. Such rights are in addition to any other remedies available to Covered Entity at law or in equity. Recipient expressly waives the defense that a remedy in damages would be adequate, and further waives any requirement in an action for specific performance or injunction for the posting of a bond by Covered Entity.

10. **Severability.** The provisions of this Agreement shall be severable and, if any provision of this Agreement shall be held or declared to be illegal, invalid or unenforceable, the remainder of this Agreement shall continue in full force and effect as though such illegal, invalid or unenforceable provision had not been contained herein.

11. **No Third Party Beneficiaries.** Nothing in this Agreement is intended to confer on any person, other than the Parties to this Agreement or their respective successors and permitted assigns, any rights, remedies, obligations or liabilities under or by reason of this Agreement. Nothing in this Agreement shall be considered or construed as conferring any right or benefit on a person not a party to this Agreement nor imposing any obligations on either Party hereto to any person not a party to this Agreement.

12. **Headings.** The descriptive headings of the articles, sections, subsections, exhibits and schedules of this Agreement are inserted for convenience only, do not constitute a part of this Agreement, and shall not affect in any way the meaning or interpretation of this Agreement.

13. **Entire Agreement.** This Agreement, together with any applicable exhibits, schedules, riders, and amendments which are fully completed and signed by authorized persons on behalf of both Parties from time to time while this Agreement is in effect, constitute the entire Agreement between the Parties hereto with respect to the subject matter hereof and supersede all previous written or oral understandings, agreements, negotiations, commitments, and any other writing and communication by or between the Parties with respect to the subject matter hereof. In the event of any inconsistencies between any provisions of this Agreement in any provisions of any exhibit, schedule, or rider, the provisions of this Agreement shall control.
14. Regulatory References. A citation in this Agreement to the Code of Federal Regulations ("C.F.R.") shall mean the cited section as that section may be amended from time to time.

Agreed to: ________________________  Agreed to: ________________________

RECIPIENT  COVERED ENTITY

By: ________________________  By: ________________________

(Authorized Signature)

Name: ________________________  Name: ________________________

(Type or Print)

Title: ________________________  Title: ________________________

Date: ________________________  Date: ________________________

Receiving Scientist: ________________________  Sending Scientist: ________________________

Name: ________________________  Name: ________________________

Date Signed: ________________________  Date Signed: ________________________

Memorandum of Understanding

As part of the University mission, developing collaborations with faculty from other institutions both domestic and international has been part of the academic fabric for decades. The collaborations may involve training, research, service and exchange programs involving both faculty and students. In some instances, international collaborations, in addition to involving academic institutions and corporations, may also involve ministries of Health or Finance or Education.

When these collaborations are proposed, a Memorandum of Understanding (MOU) is the mechanism usually used as a way in which to formalize a newly proposed program or an already existing relationship. An MOU also formalizes access to systems that are critical to your faculty member’s project work or providing students with domestic and international education and training exchange experiences. For international projects, traditionally before many international academic institutions and government agencies will entertain working with your institution, they may first require having an MOU in place.

Historically, a Memorandum of Understanding (MOU) tends to be an umbrella agreement, broad in scope and without funding. The expectation is that under the umbrella agreement other agreements with specific scope of work and appropriate budgets will be implemented. MOU’s are inclined to be short term between three to five years with the option for renewal. Usually the scope of the MOU is broad in nature with limited specificity although for student exchange MOU’s increased specificity may be required.
As you are considering drafting an MOU the common clauses to be considered are as follows:

◆ Legal identification of both parties

◆ Preamble that describes the purpose of the MOU that may also include a description of the strengths of both parties

◆ Identification of the scope of the MOU and the responsibilities of both parties that may be divided into three sections by listing:
  ◆ What your institution will bring to the collaboration
  ◆ What the other entity will contribute to the collaboration
  ◆ What both parties may jointly work on together

◆ A section that describes that the scope of the collaboration and MOU is contingent upon the application and receipt of third party funding.

◆ Language that requires that the policies of the respective institutions will apply to their respective personnel and students, and to all activities undertaken under the MOU.

◆ From each institution the name and contact information of the individual who is responsible for the success of the program should be provided.

◆ For those collaborations where the expectation of intellectual property will result from the collaboration, language describing the management of intellectual property should be included

◆ Dispute Resolution – while arbitration language may be proposed it is recommended that mediation language is more universally accepted

◆ Term and termination – important to ensure that language is included to ensure that the term of the MOU is for a finite period of time.

When drafting an international MOU the following are additional clauses that should be considered:

◆ Export control language that indicates that American institution are required to comply with US Export Control laws

◆ Non-discrimination language that is typically required and included in US negotiated agreements

◆ Language that describes that the MOU is not a treaty

◆ That the parties to the MOU are independent contractors and neither party is authorized to make representation on behalf of the other party

For MOU’s that involve international ministries of Health or Finance or Education the following are clauses for consideration:

◆ Assistance with obtaining visa/work permits for Expatriate personnel based in country

◆ Where licenses, authorizations and permits for employment and medical practice
(if applicable) are required for Expatriates, that the international agency will assist in the processing and receipt of them.

◆ To facilitate the importation and receipt of equipment, vehicles, personal household goods, assistance from the international agency in obtaining the waiver of customs duty and value added tax exemption should be requested.

◆ For American Expatriates assistance in obtaining income tax exemption.

When drafting your MOU there are clauses that are not appropriate for inclusion, and for the purpose of an MOU should be avoided and excluded. As discussed earlier, an MOU tends to be a broadly focused agreement with limited specificity and the following clauses are more appropriate to agreements that involve a specific scope of work and an appropriate budget in support of the project:

◆ Confidentiality language – since the MOU has a broadly stated purpose you want to avoid providing access to the body of work undertaken by faculty, students and the institution.

◆ Indemnification. You may encounter the request to provide indemnification. Given the nature of MOU’s, indemnification would not be appropriate, especially for those institutions precluded from agreeing to indemnification.

◆ Given the universal mission of academic institutions to generate and disseminate new knowledge for the public good, any form of publication restrictions would be in conflict with mission, but also other policies of your institution. As a tax-exempt organization, under the IRS code there is also the requirement to have the freedom to disseminate the results of the work undertaken by your institution.

◆ Any request of ownership of intellectual property should be avoided in order to comply with your institutions policies as well as US federal regulations, for example the Bayh Dole Act.

◆ Budget/Payment/Invoicing are terms that should be avoided in an MOU. These are more appropriately addressed in other types of agreements.

In conclusion, it is important to remember that MOU’s are not binding, are not enforceable, have no legal responsibilities or obligations and there is no joint venture or partnership established.

For your use a Memorandum of Understanding template is provided.
Figure 1930.5-4. Memorandum of Understanding

THIS MEMORANDUM OF UNDERSTANDING ("MOU") is made BETWEEN the __________________________located in ___________________________ with an address AND ________________________ located in _________________________ with an address ___________________ is a public university devoted to professional and graduate education, research, patient care, and public service. ___________ educates health professionals and conducts internationally recognized research, including research in ___________. __________’s mission is to serve as a fountain of high quality multi-disciplinary knowledge and promote effective research, skills training and community service for national competitiveness and sustainable socio-economic development in ________. ___________ and _____________ have as mutual objectives developing, directly or in collaboration with other institutions, advanced clinical education programs and clinical research opportunities in the field of infectious diseases with particular emphasis on HIV, tuberculosis, and malaria education and research plus other global health issues that impact health outcomes.

2. _____________ and _____________ agree to explore collaborations related to research, prevention and treatment of infectious diseases and strengthening of health care systems in_______, in the following general areas:

a) Encouraging their scientific faculty to conduct joint research activities;

b) Exchange of faculty and postgraduate scholars on terms and durations to be agreed;

c) Participation in conferences, symposia and seminars at each party’s campus;

d) When appropriate and as agreed among faculty, submitting joint proposals for solicitation of funding from sponsors;

e) Collaboration in joint research and joint publications when appropriate and in accordance with generally accepted academic standards and principles and applicable United States and Rwandan law.

f) Capacity building through exchange programs and short courses related to subjects of mutual interest;

h) Joint organization of scientific meetings such as seminars, conferences and colloquia; and

h) Postgraduate infectious diseases training at ______________

Specific collaborations may be undertaken pursuant to separate agreements identifying the parties’ respective responsibilities, project funding sources, and other issues as appropriate to the individual activities. In general, and subject to funding being obtained from third party sources, each party will bear its own expenses in connection with collaborations identified in this MOU.

3. Each party will designate a member of its faculty to act as its representative in the implementation and performance of this MOU.

a. The initial designee of ______________ is _______________________

b. The initial designee of ______________ is _______________________

4. a. Intellectual Property ("IP") means inventions, improvements and/or discoveries patentable or unpatentable, copyrightable or uncopyrightable -including but not limited
to software and biological materials. The parties anticipate that their mutual undertakings may result in development of IP.

b. Background Intellectual Property ("BIP") means all IP developed before or independent of performance of this MOU or activities pursuant to collaborations developed after execution of this MOU. Ownership of BIP used jointly by the parties shall reside with the party that created it or is the owner of the BIP pursuant to law, policy or the party’s agreements with inventors.

c. IP that is conceived and reduced to practice in performance of work undertaken pursuant to this MOU, and further collaborations as envisioned in this MOU, is subject to the terms of this MOU unless otherwise agreed in a subsequent document executed by the parties. ____________ IP means such IP is made solely by one or more personnel of ____________ and owned by _______________ under its policies. ____________ IP means such IP is made solely by one or more personnel of ____________ and owned by _______________ under its policies. Joint Intellectual Property ("JIP") means such IP that is made jointly by one or more personnel of each party to this MOU. JIP is jointly owned, each party having an undivided interest in the JIP.

d. Each party that has sole ownership of IP subject to this MOU will be solely responsible for determining upon what patent applications it will file concerning such IP, and will be responsible for prosecuting and maintaining at its cost those applications and any resulting patents, whether in the United States or in other countries. Promptly following disclosure of JIP to one or both parties, the parties will discuss and designate one party to be responsible for patent filings with respect to inventions included in the JIP. The parties will share patenting and marketing expenses pursuant to a more specific agreement that will be executed with respect to the HP. Neither party will abandon the prosecution of any patent application for HP or the maintenance of any patent for TIP without giving at least 30 days written notice to the other party so that it may determine whether to assume patent management responsibilities and expenses.

e. Subject to applicable law and the terms of funding agreements for work that results in IP subject to this MOU, ____________ and ____________ each will grant royalty-free licenses to the other party to use inventions, software and copyrighted work as described in ____________ IP and ____________ IP, respectively, for purposes of education, research and public services, but not for any commercial purpose.

5. Research materials and other materials shall be exchanged by the parties subject to execution of appropriate material transfer agreements.

6. All ____________ activities contemplated by this MOU are contingent upon the receipt by ____________ of funding from external sources to support specific activities. Terms of grants and contracts resulting in such funding will take precedence over the terms of this MOU. ____________ will not obligate ____________ with regard to performance of agreements made by ____________ without first securing ____________’s consent for such obligations.

7. The design, methodology, manner, timetable, and budget for implementation of all
collaborations resulting from this MOU shall be developed jointly by the parties. Once specific agreements are entered into as to projects and activities contemplated by this MOU, the specific agreements will take precedence over this MOU as to the matters described in the agreements. This MOU creates no obligation to enter into any subsequent agreement.

8. If a dispute between the parties related to this MOU arises, the parties will negotiate to resolve the dispute. In case of failure to reach agreement, the parties will confer in good faith with respect to the possibility of resolving the matter through mediation with a mutually acceptable third party. The parties agree that they will participate in any mediation session in good faith in an effort to resolve the dispute in an informal and inexpensive manner. All expenses of the mediator will be shared equally by the parties.

9. This MOU may be amended by the parties at any time after it is in force. An amendment must be in written form and executed by the undersigned officers or their successors.

10. This MOU will be in effect for five (5) years after the date of last signature, and may be extended only by a properly executed amendment. Either party may terminate this MOU upon three (3) months written notice, given to the undersigned signatory of the other party.

By: ________________________________ Date: ________________

By: ________________________________ Date: ________________
Figure 1930.5-5. Memorandum of Understanding for Academic Cooperation

This Memorandum of Understanding (“MOU”) concerns academic cooperation between the PRIME (Prime), _______________, and ________________(xxx), ___________________.

This MOU is established effective November 1, 2014 (“Effective Date”) to facilitate cooperation in education and research in the areas of ________________.

Article 1
To the extent practicable, PRIME and xxx each agree:

(a) To propose faculty who are willing to share and exchange their own teaching experiences (courses, seminars, etc.) in the area of bioethics and biomedical research. Both PRIME and xxx faculty need the prior approval of their respective Authorities and Dean (and any other institutional official whose approval is required by policy) before an exchange program can take place.

(b) To encourage faculty to exchange documents and publications representing the outcome of the exchange program.

(c) To inform the other party about courses, conferences and seminars pertinent to ____________.

(d) To promote the participation of its faculty in courses, conferences and seminars organized by the other party.

(e) To promote the exchange of faculty members for limited periods of time to perform collaborative academic and/or research projects.

(f) This MOU does not apply to individuals who wish to partake in clinical rotations or actively participate in human subjects research, as such activities would raise liability issues.

Article 2
Each party agrees to the following:

(a) To collaborate with the other party on the offering of courses in research methodology and ethics using both face-to-face instruction and distance education.

(b) To collaborate on the development of workshops in research methodology and research ethics.

(c) To deliver a standard curriculum prepared and agreed between parties, in the workshops, courses, etc. to allow them to include the logos of both parties on the certificates, and to have these logos on the handouts.

Article 3
Any joint activity of the parties that might involve fees, reimbursements, or the awarding of degrees shall require execution of a separate agreement.

Article 4
Xxx will work with PRIME to apply for and implement relevant and mutually agreed research, health education, and public health proposals as announced by different funding agencies. Xxx and
PRIME will reach agreement on the terms and conditions under which joint funding is sought and individual scopes of work for such collaborations. Any agreement for a specific collaborative project will supersede the terms of this MOU as to that collaborative project.

**Article 5**

(a) Before any specific activity can be implemented, the parties shall discuss the issues involved to the satisfaction of each party and enter into a specific activity agreement based on the mutually agreed objectives and outcomes of the relationship. Each party’s policy for review and approval of funding applications and agreements for project implementation will be followed.

(b) Each party agrees to carry out its activities under this MOU in accordance with the laws and regulations of its country and the state or local governments that may have authority over the party’s activities.

(c) The parties acknowledge that the evaluation, selection and funding of projects under this MOU must take into account and may be affected by the restrictions imposed upon PRIME by the export control laws and regulations of the United States.

(d) The parties agree that visits by faculty and students from one institution to the other shall be subject to the entry and visa regulations of the United States and Egypt, as applicable, and also shall comply with the regulations and policies of PRIME and xxx.

(e) This MOU is not intended to create legal or financial relationships between the parties. Rather, it is designed to facilitate and develop a genuine and mutually beneficial exchange process and research relationship.

**Article 6**

This MOU shall be effective for a term of five (5) years from the Effective Date (the “Term”). This MOU may be terminated by PRIME or xxx with a minimum of 90 days written notice. If feasible, activities in progress at the time of termination of this MOU shall be permitted to conclude as planned unless otherwise agreed.

**Article 7**

PRIME and xxx subscribe to the principle of equal opportunity and do not discriminate on the basis of race, color, religion, age, ancestry, national origin, sex, sexual orientation or gender identity, nondisqualifying physical or mental disability, marital status or veteran’s status. PRIME and xxx shall abide by these principles in the administration and implementation of this MOU and individual undertakings, and shall not impose criteria that violate principles of nondiscrimination on the selection of scholars or students.

**Article 8**

All notices, demands and communications between the parties shall be in writing and shall be sent by email with a confirmation of receipt requested and by recognized overnight delivery service with confirmation of receipt to the addresses of the applicable representatives below or substitute addresses a party provides by proper notice:
Article 9
This MOU may be amended by written consent of the parties.

Article 10
The representatives of the institutions will communicate on at least an annual basis to evaluate past and ongoing activities, and to work out detailed plans for the succeeding year. The institutions will review this MOU in the last year of the Term to evaluate the progress and the quality of the activities under the MOU. This MOU may be extended for additional periods upon written consent of the parties.

The parties have caused this MOU to be executed by their duly authorized representatives on the dates indicated below.

<table>
<thead>
<tr>
<th>IF TO xxxx</th>
<th>IF TO PRIME</th>
</tr>
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<tbody>
<tr>
<td>With a copy to:</td>
<td></td>
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</table>

Material Transfer Agreements
The management of Material Transfer Agreements (MTA) may fall within the purview of the research administrator’s portfolio but also may be handled by the Technology Transfer Office (TTO). However, for research administrators it is important to understand the role that MTA’s play in the conduct of research within academic institutions and in sponsored research agreements.

Historically faculty within academic institutions as well as within the for-profit sector develop various types of tangible materials that may be used as research tools to enhance the results and outcomes of research projects. Examples of materials include any tangible research material of scientific and/or potential commercial value and may include, but not be limited to the following substances: cell lines, viruses, organisms, and monoclonal antibodies to name just a few. The following are examples of the types of organizations that are likely to request and also generate materials: government agencies, universities, non-profit organizations and for-profit organizations.

What does the transfer of tangible materials allow the various parties to do? The exchange of materials makes research tools available for scientific use, serves as a
resource to explore new avenues of research, and may be used to facilitate or expedite research.

Why is it important to use an MTA when exchanging tangible materials? The use of an MTA will safeguard the proprietary and intellectual property rights of the provider, and allows the provider to maintain control over the use of their materials. For the Provider the use of an MTA allows the Provider to maintain ownership and control of the materials.

What can happen if an MTA is not used when exchanging tangible materials? There is the potential to sacrifice the protection of potential inventions, patents, and the ability to market and license the patented technology. Lack of an MTA also may create a breach of an existing contract, grant, or licensing agreement. There may be the potential of creating a liability for the institution if biohazard or other “risk-associated” material is being exchanged.

When you or the TTO receives an MTA what are the reasons and purpose for reviewing the MTA? Some of the steps to be undertaken in the review of an MTA is to identify in which project the material will be used and the source of funding, e.g. federal or from a for-profit sponsor. Depending on the terms of the funding agreement, in reviewing the MTA ensure that the MTA terms do not conflict with any already existing agreement terms and conditions. Will the material be used in a research project for which there already exists: a disclosed invention, filed patent, or licensed technology? If any of these exist it will be critical to ensure that the terms of the MTA do not conflict with the terms of existing agreements and in this instance, consultation with the TTO would be in order.

Key issues for consideration include ensuring that:

◆ the agreement is in compliance with University policy, and for State supported institutions, the agreement complies with state regulations and laws;
◆ the rights to publish and to own the research results are protected
◆ potential “liability issues” are identified and properly handled, addressed, and/or deleted;
◆ the faculty receiving the material and other faculty are not restricted now or in the future regarding their research efforts and program, and
◆ existing agreements are not breached and future funding agreements are not restricted nor compromised.

What are the most common issues and problems encountered in negotiating MTA’s primarily those received from the for-profit section, but also from other academic institutions?

◆ Definition of Material – acceptable definition includes the original material, progeny, and unmodified derivations. Unacceptable definition would be one that includes derivatives, modification of material, improvements, and/or any material that could not have been made without the use of the provided material. All of these terms describe new intellectual property created by the recipient of the material that did not exist prior to the receipt of the material and none
of these derivatives, modifications, and improvements were transferred by the provider to the recipient. Ownership of modifications, and new and improved tangible materials should be established in accordance with the U.S. Patent laws.

◆ **Purpose** – a section that clearly and narrowly defines the use of the material

◆ **Publication** – limit the length of time for review of publications for determining the existence of the provider’s confidential information. Avoid accepting language that allows the provider to approve publications or be granted the right to remove the recipient’s results from a publication because the provider considers them detrimental to its organization.

◆ **Intellectual Property** – if your institution creates new intellectual property what rights may be granted to the provider of the material? It would be acceptable to include a clause that would provide to the provider a non-exclusive license to new uses for or improvement to the provider’s material for internal research purposes only. What would not be acceptable are the following:

◆ granting a non-exclusive license to new uses for or improvements to the material for any purpose, including the manufacture, use or sale of the material. Why would this be problematic to your TTO? This clause would make it difficult for the TTO to find a licensee for any inventions that resulted from the use of the material.

◆ granting a non-exclusive right to license any invention resulting from the use of the material would result in giving up rights to intellectual property that did not exist at the time of the receipt of the provider’s material. Doing so would make it difficult to find a licensee for any invention if you have already granted a non-exclusive license to the provider.

◆ avoid granting a first right of refusal to inventions that result from the use of the provider’s material because this would restrict TTO’s ability to find a licensee. TTO would be required always to go back to the provider to offer them the option to license the technology. If you are unable to avoid such a term, then you should place a time-limit on the option for first right of refusal, e.g. six months from the time of disclosure and that a decision by the provider has to be made within a thirty day period from notice of a third party offer.

◆ avoid granting an exclusive license to provider.

◆ **Research Data and Results** – all research results and data created in the direct performance of research defined in the scope of work. Any request for unrestricted use of recipient’s research data and results and also request for research report should also be avoided

◆ **Confidential Information** – is defined as any information, know-how, and/or documentation related to the material that is provided by the provider to recipient in writing and is marked as “confidential” by provider.

◆ **Confidentiality** – providers confidential information received will be treated with the same degree of care as institution’s own confidential information. In order to
comply, the provider should be required to provide such information in written form and marked as such.

◆ **Indemnification** – avoid agreeing to indemnification language, especially for State supported institutions.

What are other expectations of the Provider of material? Provider should be willing to make their materials available to non-profits while not placing restrictions on the funding sources used in support of the research in which the materials will be used. For the Provider of the material there should not be the automatic rights to inventions made by the Recipient of the materials.

For the Recipient of the materials what are the expectations of how they may use the materials? The use should be restricted to what is agreed to by the Provider. The Recipient should not transfer materials to third parties. The Recipient understands that it does not automatically receive any commercial rights to the materials. And as stated previously, the recipient’s research results should not be treated as confidential.

When your institution exchanges materials what types of agreements are available for you to use? There is one MTA that has been around for many years that was developed between the National Institutes of Health (NIH) in conjunction with the Association of University Patent Administrators (AUTM) for use by academic institutions. Initially a master Uniform Biological Material Transfer Agreement was developed to simplify the transfer of materials, and many institutions signed onto the Master Agreement. For signers of the Master UBMTA the transfer of materials was achieved by the use of an Implementing Letter. Access to information about the UBMTA can be found at:

http://www.autm.net/Content/NavigationMenu/Members/MaterialTransfer-Agreements/default.htm

However, if your institution would prefer to develop its own unique MTA, AUTM has developed a new set of freestanding MTA templates that are available for institutions that are not signatories to the UBMTA master. The reason AUTM created this set of templates was for those materials that do not easily fit within the UBMTA’s definition of materials. These templates are designed so that each institution may customize to include clauses that are appropriate and pertinent to the material to be transferred. Information and access to the AUTM MTA templates may be found at:

http://www.autm.net/AUTM_MTA_Templates/12639.htm

In conclusion, with regard to the management and review of MTA’s it is important for a research administrator to understand the context in which an MTA will be used, identify who is responsible for the review and negotiation of such agreements, and have an understanding of what MTA terms are and are not acceptable.

For your information an example of the AUTM MTA template for Biological Materials as discussed above is shown below.
Figure 1930.5-6. Standard Material Transfer Agreement For the Transfer of Biological Materials Between Non-profit Organizations

The Provider and Recipient identified below hereby agree to be bound by the terms set forth in the attached Exhibit A, and Exhibit B if applicable, to govern the transfer of the Original Material described herein. Each party represents that it has made no changes to the attached Exhibit A or Exhibit B as published by the Association of University Technology Managers and available on their website, except as modified by the checked boxes in Exhibit B.

[ ] If checked, this Agreement is also subject to additional terms and conditions set forth on the attached Exhibit B. In the event of a conflict between any specific terms or conditions in Exhibit A and Exhibit B, Exhibit B shall govern.

<table>
<thead>
<tr>
<th>Provider (the organization providing the Original Material)</th>
<th>Recipient (the organization receiving the Original Material)</th>
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<tbody>
<tr>
<td>Address:</td>
<td>Address:</td>
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<table>
<thead>
<tr>
<th>Provider Scientist</th>
<th>Recipient Scientist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Name:</td>
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<tr>
<td>Title:</td>
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Original Material (description of the material being transferred) | Shipping Address

| Name: | Address: |

Exhibit A

Standard Terms

I. DEFINITIONS:

1. Provider: Organization providing the Original Material. The name and address of this party is specified on page 1 of this Agreement.

2. Provider Scientist: The name and address of this party is specified on page 1 of this Agreement.

3. Recipient: Organization receiving the Original Material. The name and address of this party is specified on page 1 of this Agreement.

4. Recipient Scientist: The name and address of this party is specified on page 1 of this Agreement.

5. Original Material: The description of the Material being transferred is specified on page 1 of this Agreement.

6. Material: Original Material, Progeny, and Unmodified Derivatives. The Material shall not include: (a) Modifications, or (b) other substances created by the Recipient through the use of the Material which are not Modifications, Progeny, or Unmodified Derivatives.

7. Progeny: Unmodified descendant from the Material, such as virus from virus, cell from cell, or organism from organism.

8. Unmodified Derivatives: Substances created by the Recipient which constitute an unmodified functional subunit or product expressed by the Original Material. Some
examples include: subclones of unmodified cell lines, purified or fractionated subsets of the Original Material, proteins expressed by DNA/RNA supplied by the Provider, or monoclonal antibodies secreted by a hybridoma cell line.

9. Modifications: Substances created by the Recipient which contain/incorporate the Material.

10. Commercial Purposes: The sale, lease, license, or other transfer of the Material or Modifications to a for-profit organization. Commercial Purposes shall also include uses of the Material or Modifications by any organization, including Recipient, to perform contract research, to produce or manufacture products for general sale, or to conduct research activities that result in any sale, lease, license, or transfer of the Material or Modifications to a for-profit organization. However, industrially sponsored academic research shall not be considered a use of the Material or Modifications for Commercial Purposes per se, unless any of the above conditions of this definition are met.

11. Nonprofit Organization(s): A university or other institution of higher education or a non-profit organization officially recognized or qualified under the laws of the country in which it is organized or located, or any nonprofit scientific or educational organization qualified under a federal, state or local jurisdiction’s nonprofit organization statute. As used herein, the term also includes national, state or local government agencies.

II. TERMS AND CONDITIONS OF THIS AGREEMENT:

1. The Provider retains ownership of the Material, including any Material contained or incorporated in Modifications.

2. The Recipient retains ownership of: (a) Modifications (except that, the Provider retains ownership rights to the Material included therein), and (b) those substances created through the use of the Material or Modifications, but which are not Progeny, Unmodified Derivatives or Modifications (i.e., do not contain the Original Material, Progeny, Unmodified Derivatives). If either 2 (a) or 2 (b) results from the collaborative efforts of the Provider and the Recipient, joint ownership may be negotiated.

3. The Recipient and the Recipient Scientist agree that the Material:
   (a) is to be used solely for teaching and academic research purposes;
   (b) will not be used in human subjects, in clinical trials, or for diagnostic purposes involving human subjects without the written consent of the Provider;
   (c) is to be used only at the Recipient organization and only in the Recipient Scientist laboratory under the direction of the Recipient Scientist or others working under his/her direct supervision; and
   (d) will not be transferred to anyone else within the Recipient organization without the prior written consent of the Provider.

4. The Recipient and the Recipient Scientist agree to refer to the Provider any request for the Material from anyone other than those persons working under the Recipient Scientist’s direct supervision. To the extent supplies are available, the Provider or the Provider Scientist agrees to make the Material available, under an agreement having terms
consistent with the terms of this Agreement, to other scientists (at least those at Nonprofit Organization(s)) who wish to replicate the Recipient Scientist’s research; provided that such other scientists reimburse the Provider for any costs relating to the preparation and distribution of the Material.

5. (a) The Recipient and/or the Recipient Scientist shall have the right, without restriction, to distribute substances created by the Recipient through the use of the Original Material only if those substances are not Progeny, Unmodified Derivatives, or Modifications.

(b) Under an agreement at least as protective of the Provider’s rights as this Agreement, the Recipient may distribute Modifications to Nonprofit Organization(s) for research and teaching purposes only.

(c) Without written consent from the Provider, the Recipient and/or the Recipient Scientist may NOT provide Modifications for Commercial Purposes. It is recognized by the Recipient that such Commercial Purposes may require a commercial license from the Provider and the Provider has no obligation to grant a commercial license to its ownership interest in the Material incorporated in the Modifications. Nothing in this paragraph, however, shall prevent the Recipient from granting commercial licenses under the Recipient’s intellectual property rights claiming such Modifications, or methods of their manufacture or their use.

6. The Recipient acknowledges that the Material is or may be the subject of a patent application. Except as provided in this Agreement, no express or implied licenses or other rights are provided to the Recipient under any patents, patent applications, trade secrets or other proprietary rights of the Provider, including any altered forms of the Material made by the Provider. In particular, no express or implied licenses or other rights are provided to use the Material, Modifications, or any related patents of the Provider for Commercial Purposes.

7. If the Recipient desires to use or license the Material or Modifications for Commercial Purposes, the Recipient agrees, in advance of such use, to negotiate in good faith with the Provider to establish the terms of a commercial license. It is understood by the Recipient that the Provider shall have no obligation to grant such a license to the Recipient, and may grant exclusive or non-exclusive commercial licenses to others, or sell or assign all or part of the rights in the Material to any third party(ies), subject to any pre-existing rights held by others.

8. The Recipient is free to file patent application(s) claiming inventions made by the Recipient through the use of the Material but agrees to notify the Provider upon filing a patent application claiming Modifications or method(s) of manufacture or use(s) of the Material.

9. Any Material delivered pursuant to this Agreement is understood to be experimental in nature and may have hazardous properties. THE PROVIDER MAKES NO REPRESENTATIONS AND EXTENDS NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED. THERE ARE NO EXPRESS OR IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR THAT THE USE OF THE MATERIAL WILL NOT INFRINGE ANY PATENT, COPYRIGHT, TRADEMARK, OR OTHER PROPRIETARY RIGHTS.

10. Except to the extent prohibited by law, the Recipient assumes all liability for damages
which may arise from its use, storage or disposal of the Material. The Provider will not
be liable to the Recipient for any loss, claim or demand made by the Recipient, or made
against the Recipient by any other party, due to or arising from the use of the Material by
the Recipient, except to the extent permitted by law when caused by the gross negligence
or willful misconduct of the Provider.

11. This Agreement shall not be interpreted to prevent or delay publication of research findings
resulting from the use of the Material or the Modifications. The Recipient Scientist agrees to
provide appropriate acknowledgement of the source of the Material in all publications.

12. The Recipient agrees to use the Material in compliance with all applicable statutes and
governmental regulations and guidelines such as, for example, those relating to research
involving the use of animals or recombinant DNA.

13. This Agreement will terminate on the earliest of the following dates: (a) on completion of
the Recipient’s current research with the Material, or (b) on thirty (30) days written notice
by either party to the other, or (c) on the date specified in Exhibit B, provided that:

(i) if termination should occur under 13(a) or (c) above, the Recipient will discontinue its use
of the Material and will, upon direction of the Provider, return or destroy any remaining
Material. The Recipient, at its discretion, will also either destroy the Modifications or
remain bound by the terms of this agreement as they apply to Modifications;

and

(ii) in the event the Provider terminates this Agreement under 13(b) other than for breach
of this Agreement or for cause such as an imminent health risk or patent infringement,
the Provider will defer the effective date of termination for a period of up to one year,
upon request from the Recipient, to permit completion of research in progress. Upon the
effective date of termination, or if requested, the deferred effective date of termination,
Recipient will discontinue its use of the Material and will, upon direction of the Provider,
return or destroy any remaining Material. The Recipient, at its discretion, will also either
destroy the Modifications or remain bound by the terms of this agreement as they apply
to Modifications.

14. Paragraphs 6, 9, and 10 shall survive termination.

**Exhibit B**

**Optional Terms**

If checked, the following terms apply to this Agreement:

[ ] This Agreement shall terminate on . Upon termination, the Recipient will either
destroy any remaining Material or return it to the Provider, as directed by the Provider.

[ ] A transmittal fee of shall be paid by Recipient to Provider, for preparation and
distribution costs.

[ ] The Recipient intends to use the Material for purposes including but not limited to those
described below:

[ ] To the extent permitted by law, Recipient agrees to treat in confidence, for a period of three
(3) years from the date of its disclosure, any of Provider’s written information about the Material that is stamped “Confidential” (“Confidential Information”). Any oral disclosures from Provider to Recipient shall be identified as being Confidential Information by notice delivered to Recipient within ten (10) days after the date of the oral disclosure. Confidential Information does not include information that:

a. has been published or is otherwise publicly available at the time of disclosure to the Recipient;

b. was in the possession of or was readily available to the Recipient without being subject to a confidentiality obligation from another source prior to the disclosure;

c. has become publicly known, by publication or otherwise, not due to any unauthorized act of the Recipient;

d. Recipient can demonstrate it developed independently, or acquired without reference to or reliance upon Confidential Information; or

e. is required to be disclosed by law, regulation, or court order.

[ ] Additional binding terms:

**Teaming Agreements**

Traditionally Teaming Agreements are used when two or more organizations have agreed that they wish to collaborate on a project (research, training or technical assistance) that will be funded through a federal agency specific funding announcement, for example, Funding Opportunity Announcement (FOA), Request for Application (RFA) or Request for Proposal (RFP). The types of organizations involved may include academic institutions, not for profit organizations and /or foundations, and for profit organizations both domestic and international.

As part of the proposal development, preparation and submission it is critical to have drafted, negotiated and executed the Teaming Agreement prior to the submission of the proposal. The first decision to be made among the participants is who will take the lead and serve as the prime applicant on the proposal and which institution(s) will be identified as sub-recipients. In those circumstances when there are three or more participants, individual teaming agreements will be executed between the Prime and each individual sub-recipient and in the body of each Teaming Agreement reference will be made to the other partners involved.

The purpose of the Teaming Agreement is to clearly establish the guidelines for the preparation of the application, and should also delineate the roles and responsibilities of all the parties involved.

The prime applicant takes the lead for preparing and submitting the proposal, and sub-recipients are responsible for preparing those technical portions of the proposal related to their tasks and deliverables along with associated cost proposals.

As you are drafting and negotiating a Teaming Agreement the following are common clauses that should be considered for inclusion:
◆ Legal identification of the parties

◆ Purpose of the Agreement – outlines guidelines and the rights and obligations of all parties involved.

◆ Language should be included limiting the Agreement only to the specific FOA, RFA or RFP and any resultant award, and not to any other work undertaken by your institutions and your partner(s) that falls outside the purpose of the FOA, RFA or RFP

◆ Acknowledgement that should an award be made, the prime shall negotiate a subcontract agreement that will include the provisions of the Award

◆ Exclusivity – critical to include language that requires both the prime and the sub-recipient(s) not to collaborate or join with any other party for submission of another proposal in response to the specific FOA or RFA or RFP

◆ Confidential and Proprietary Information (CPI) - each party will contribute its CPI, and in order to protect the ownership of these contributions, a clause that restricts the use of each party’s CPI to the development and inclusion in this proposal only and may not be used beyond the expiration of the Teaming Agreement

◆ Ownership of Intellectual Property – a clause that clearly delineates ownership and management of intellectual property including rights in data, copyrights and patents should be included

◆ Term – duration and termination of the agreement is contingent upon the receipt of an award or notification that an award will not be made; in either instance the Teaming Agreement would be terminated. Recognition of how to manage the situation should the sub-recipient’s portion of the proposal not be approved

◆ Dispute resolution – language that describes mediation is recommended

◆ Joint venture – a clause that describes that the Teaming Agreement does not constitute or establish a formal joint venture, partnership, or formal business organization of any kind between the parties.

◆ Authorized Representatives – include a clause that identifies the individuals who are responsible for programmatic/technical issues and/or contractual terms and conditions

When drafting a Teaming Agreement with international partners there are one or two clauses your partner may request:

◆ Force Majeure – a clause that describes force majeure circumstances

◆ Non-compete - international partners may request a non-compete clause related to the recruitment of personnel. It is recommended that you avoid the inclusion of such language. However, should you find that your international partner insists upon such language, be sure to put a non-compete time limit of six months but no more than one year. Also include language that allows personnel to independently respond to job announcements.
In conclusion, Teaming Agreements serve the purpose of clearly delineating the roles and responsibilities of the prime and sub-recipients in the preparation, drafting and submission of a proposal in response to a specific FOA, RFA, or RFP, and is time limited to either the receipt of an award or notification that the proposal was not successful.

For your use here are several examples of Teaming Agreements.

---

**Figure 1930.5-7. Simplified Teaming Agreement**

This Agreement is made and entered into by and among __________, having offices at __________ and the ________________, having offices at ____________.

WHEREAS the parties intend to collaborate to submit a proposal for [include funding agency name, RFA name and title],

WHEREAS the parties intend by this agreement to clarify their roles and responsibilities in the event an award is made as a result of the proposal,

NOW THEREFORE, the Parties hereby agree as follows:

1. _________________ will be the prime applicant. In the event that an award is made by (insert acronym for agency), the parties are prepared to enter into negotiated subaward agreements for research to be performed under the award; such agreements will ensure compliance with the prime award and all pertinent Federal regulations.

2. _______________ will take principal charge of preparing and submitting the proposal. The parties will collaborate to ensure that information and documentation necessary to meet the proposal requirements is provided in a timely manner.

3. If an award is made to __________ based upon the proposal, __________ will promptly provide a copy of such funding agreement to each subrecipient and will issue a subaward agreement in accordance with the funding agreement, the proposal, and this Agreement. If the terms of such funding agreement appear to be inconsistent with the provisions of this Agreement, the parties will attempt in good faith to resolve any such inconsistencies. The order of precedence of agreement documents will be: the funding agreement from the sponsor to the prime applicant; the subaward from the prime applicant to the subcontractor; and this Agreement.

4. Role and Responsibilities of _________ (Prime)

5. Role and Responsibilities of ___ [for each proposed subrecipient]

6. Liability. The parties are not (and nothing in this Agreement may be construed to constitute them as) partners, joint venturers, agents, representatives or employees of the other, nor is there any status or relationship between them other than that of independent contractors. No Party has any responsibility or liability for the actions of another Party except as specifically provided in this Agreement. No Party has any right or authority to bind or obligate another Party in any manner or make any representation or warranty on behalf of another Party.

7. Term and Termination. This Agreement is effective as of __________ (Effective Date)
and remains in full force and effect for the period of any award made as a result of
the proposal to ____________. This Agreement will terminate as to all parties upon
determination that the proposal will not be funded.

8. Modifications. Modifications to this Agreement may be made only in writing signed by
authorized representatives by all parties.

9. Assignment. This Agreement may not be assigned or otherwise transferred by either
Party, in whole or in party, without the express prior written consent of this other Party.

10. Counterparts. This Agreement may be executed in counterparts, each having the legal
effect of an original.

The undersigned parties have caused this Agreement to be executed by their authorized
representatives as of the Effective Date.

Name of Prime Institution

Signed: ___________________________  Date:
Title:

Name of Subrecipient Institution

Signed: ___________________________  Date:
Title:
Figure 1930.5-8. Teaming Agreement

Effective Date:  date

PARTIES TO THE TEAMING AGREEMENT

<table>
<thead>
<tr>
<th>PRIME</th>
<th>Subrecipient</th>
</tr>
</thead>
</table>

AGREEMENT BETWEEN THE PARTIES

PRIME Institution___________ (hereinafter referred to as “_______”) with offices located at________________________, and xxx (hereinafter referred to as ‘the partner’) with offices at xxx have discussed mutual interests in bidding for Agency/Sponsor RFA/RFP number, titled RFA/RFP Title (hereinafter referred to as “the RFA”), and as a result have agreed to execute this Teaming Agreement (hereinafter referred to as “agreement”).

Whereas PRIME and xxx intend to collaborate to submit a proposal for funding for a project in the Location, both partners have concluded that because of their complimentary capabilities, they would mutually benefit from a teaming arrangement in order to develop the best management and technical approach for the response to the RFA and any award made by the Agency/Sponsor pursuant to the RFA (hereinafter the “Award”). The preparation of this proposal will involve sharing of proprietary information by each party.

NOW, THEREFORE, the Parties hereby agree as follows:

ARTICLE 1.0 PURPOSE OF AGREEMENT

1.1 The purpose of this Agreement is to establish guidelines and define the mutual rights and obligations of the Parties during the preparation of the application in connection with the RFA, and, should an award be made to PRIME and its partners as a result of the application, PRIME will proceed to negotiate a subcontract with the partner. It is, further, the intent of this Teaming Agreement to foster the development of a successful application by combining the strength that the partner brings.

1.2 The Application will be based on PRIME being the prime recipient for the Award.

1.3 Each Party shall be responsible for its own expenses related to application development, unless otherwise agreed to in writing by the Parties.

1.4 The Statement of Work of the partner is set forth in article 3.0 and 4.0 of this agreement.

ARTICLE 2.0 RELATIONSHIP

2.1 PRIME and the partner based on their complementary expertise agree to collaborate to submit an Application for the RFA that is consistent with their goals and respective methodologies and expertise.

2.2 This Agreement shall relate only to the Application and any resultant Project and to no other effort currently being undertaken by PRIME or the partner, jointly or separately.

2.3 PRIME shall recognize and identify the partner in the Application and, if awarded the Cooperative Agreement. Each of the parties will give full recognition and consideration to the role and contribution of the other Party in all information releases concerning the Application that directly pertains to the other Party’s area(s) of responsibility.

ARTICLE 3.0 STATEMENT OF WORK – PREPARATION OF APPLICATION

3.1 The Parties agree to work in a mutually supportive manner during the process of developing the application.
3.2 PRIME shall bear the responsibility for the preparation and delivery of the application documents. The partner shall provide technical assistance and information as may be required by PRIME.

3.3 The partner shall prepare in a format acceptable to PRIME, the following sections:

- Strategic and technical approach related to: xxx
- Intermediate result(s) xxx
- Corporate capability statement, tailored to the responsibilities of the partner in the application.
- Illustrative technical assistance plan for the following: quality assurance / quality improvement.
- Budget (cost) component related to the partner’s proposed activities in an agreed format, and in accordance with the requirements set forth in the RFA.
- Business information and other relevant information in accordance with the requirements set forth in the RFA.
- Other information necessary to enhance the competitiveness of the application.

3.4 The partner agrees to adhere to the requirements for submission including deadlines set by PRIME, and shall make personnel available, at times and locations requested by the PRIME, to contribute towards preparation of the application.

3.5 Considering that the other partner in this application, xxx, will play a key complementary role in the design of the strategic and technical approach for intermediate result xxx, the partner will work in close collaboration with xxx, under the direction of PRIME and/or consultant(s) hired by PRIME, to ensure a high quality design.

ARTICLE 4.0 INTENT TO NEGOTIATE A SUBCONTRACT

4.1 Should an award be made to PRIME pursuant to this RFA, PRIME and the partner shall negotiate in good faith and in a timely manner to conclude a mutually acceptable sub-contract pursuant to the provisions of the Award between PRIME and Agency/Sponsor.

4.2 It is agreed that while PRIME will be responsible for the management of the resultant project, the partner shall take responsibility for the areas outlined in the project proposal and in line with the provisions of the prime Award.

4.3 Considering that the other partner in this application, xxx, will play a key complementary role in the implementation of actions contributing to intermediate result, should an award be made to PRIME, the partner will work in close collaboration with xxx, under the direction of PRIME, to ensure high quality and timely implementation of planned actions.

ARTICLE 5.0 EXCLUSIVITY

For purpose of the Agreement, the partner agrees that in consideration of being included in PRIME’s application for the project entitled “Title” (Agency/Sponsor RFA/RFP number in Location), it will not collaborate or join with any other party(ies) in any additional application submitted in response to this RFA.

ARTICLE 6.0 CONFIDENTIAL INFORMATION

6.1 The partner agrees not to share any information regarding this Agreement, nor any discussions
or activities in the execution thereof, beyond the corresponding staff members or hired consultants of PRIME and formal consortium. Either party may disclose the existence of the Agreement.

6.2 Both Parties anticipate that it may be necessary to provide access to information of a proprietary nature to the other - including, without limitation, computer programs, code, algorithms, know-how, formulas, processes, ideas, inventions, and other technical, business, financial and product development plans, forecasts, strategies and information. Each Party agrees that proprietary information provided to the other Party and marked as confidential shall be treated as fully confidential and the exclusive property of the disclosing Party.

6.3 The receiving Party shall use such information solely for the purpose for which it is supplied, and shall not disclose it to anyone other than the employees and consultants who participate in the activities contemplated herein, without the prior written consent of the disclosing Party. The Parties further agree to advise their subsidiaries, affiliates, employees and agents having access to the proprietary information of the obligation to ensure its protection.

6.4 All proprietary information shall be promptly returned, together with all copies thereof, to the disclosing Party or destroyed after receiving Party’s need for it has expired, or upon written request of the disclosing Party.

6.5 The obligations of non-use and non-disclosure of information shall survive any Agreement termination for three (3) years from the date of disclosure of the proprietary Information.

ARTICLE 7.0 RIGHTS IN DATA, COPYRIGHTS AND PATENTS

Both parties agree that this Agreement does not grant or confer any right, title or interest in the other’s products or services. If, during the life of this Agreement, patentable inventions or copyrighted works result, the following shall apply:

A. Subject to the rights of Agency/Sponsor under any ensuing Award, no license, express or implied, shall inure to the benefit of other participating parties as a result of a patent being granted to one of the parties for inventions made exclusively by its employees or as a result of a copyrighted work that originated exclusively from its employees.

B. PRIME and partner shall jointly hold title to any inventions made, and copyrighted works originated, jointly by PRIME and partner.

C. Each party shall cooperate with the other to enable it to perfect its patent rights.

ARTICLE 8.0 DURATION OF AGREEMENT

8.1 This Agreement shall become effective upon the Effective Date shown at the beginning of this document, and shall conclude upon the occurrence of any of the following events or conditions:

◆ Receipt by PRIME of written notice from Agency/Sponsor that it will not make an Award under the RFA.

◆ Receipt by PRIME of written notice of Agency/Sponsor’s rejection of the Application, or Award to an awardee other than PRIME.

◆ Receipt by PRIME of written notice from Agency/Sponsor stating Agency/Sponsor’s disapproval of PRIME’s use of the partner as a participant. PRIME will provide Agency/Sponsor’s written notification to the Subcontractor. PRIME will use reasonable efforts to secure Agency/Sponsor’s approval of the use of the partner’s technical
services and proposed personnel for the award.

◆ Any significant change in the financial capability of either Party that, in the opinion of either Party, seriously affects a Party’s ability to perform its responsibilities.

◆ Upon execution of a Subcontract by the Parties after receipt of the Award by PRIME pursuant to this RFA.

◆ The Parties terminate this Agreement by mutual consent.

◆ Failure by either Party to comply with any of the material provisions of this Agreement.

8.2 Upon termination of this Agreement, all obligations hereunder shall terminate, except those that expressly survive such termination.

ARTICLE 9.0 NONSOLICITATION
During the period of performance of this Agreement and for one (1) year thereafter, neither Party, directly or indirectly, shall hire or attempt to hire any employee of the other Party without the express written permission of such other Party. This provision shall not be construed to prevent either Party from hiring a person who responds to an advertisement or job posting, or who is contacted by placement personnel not specifically targeting the employees of either Party.

ARTICLE 10.0 DISPUTE RESOLUTION AND SEVERABILITY
10.1 The Parties shall exhaust all attempts to resolve all disputes through informal means. This may include mediation or any other procedures upon which the Parties agree. Each Party agrees that, prior to resorting to litigation to resolve any dispute, it shall confer with the other Party to determine whether alternative dispute procedures that are less expensive or less time-consuming can be adopted to resolve the dispute.

10.2 If any of the provisions of this Agreement is found by an arbitrator, court or other competent authority to be void or unenforceable, such provision shall be deemed to be deleted from this Agreement and the remaining provisions of this Agreement shall continue in full force and effect. Notwithstanding the foregoing, the Parties shall thereupon negotiate in good faith in order to agree the terms of a mutually satisfactory provision to be substituted for the provision so found to be void or unenforceable.

ARTICLE 11.0 MODIFICATION
This Agreement and any of its provisions may be amended, waived or modified only in writing, signed by an authorized representative of each Party.

ARTICLE 12.0 LIABILITY
PRIME and partner are not (and nothing in this Agreement may be construed to constitute them as) partners, joint venturers, agents, representatives or employees of the other, nor is there any status or relationship between them other than that of independent contractors. Neither Party has any responsibility or liability for the actions of the other Party except as specifically provided in this Agreement. Neither Party has any right or authority to bind or obligate the other Party in any manner or make any representation or warranty on behalf of the other Party.

ARTICLE 13.0 FORCE MAJEURE
Any delays in or failure of performance of either Party shall not constitute default or give rise to any claim for damages if and to the extent caused by or resulting from acts of God, earthquake, fire,
explosion, flood, the elements, strikes, boycotts, labor disturbances or differences with workmen, acts of the public enemy, war, rebellion, riots, acts of the government, or any cause whatsoever beyond the control of the Party in default, but performance hereunder shall be resumed as soon as the cause preventing performance has been removed.

**ARTICLE 14.0 AUTHORIZED REPRESENTATIVES**

All communications relating to this Agreement shall be directed to the specific persons, identified on the next page, designated to represent PRIME and the partner. Communications that are not properly directed to the persons designated in accordance with this section shall not be binding upon the Parties.

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**Visiting Scientist / Scholar Agreements**

One of the traditions among faculty researchers and teachers who have special areas of knowledge, expertise and experience is to provide to others opportunities to learn about new areas of research and techniques, or new innovative areas of education. Institutions support faculty in these endeavors and facilitate opportunities for them to interact with other scientists, colleagues and students who will have access to University research resources, facilities and faculty, not otherwise available to the public.

When faculty receive requests from individuals to spend time on campus for extended periods of time, if not already in place, the first step to manage this type of campus visit, is to adopt a Visiting Scientists and Scholars Policy. The purpose of the policy may be twofold:

1. A policy that permits faculty to:
   - engage in on-campus, hands-on open research collaboration with professionals who are working in the academic, public, industrial and international communities;
   - interchange/exchange information, and
   - provide training and educational opportunities to students

2. A policy that protects the University’s
   - existing or potential intellectual property rights, and
   - contractual obligation to sponsors

3. The purpose of the policy is to provide faculty with mechanisms and safeguards:
   - for hands-on instruction and/or research collaboration using institution faculty, resources and laboratory facilities, to individuals who are not University employees;
   - to ensure compliance with institution policies and procedures
   - to ensure compliance with institution contractual obligations to federal and industrial sponsors;
   - for institution to retain original copies of laboratory notebooks;
◆ for the institution to require visiting scientists to submit any reports or other outstanding documents prior to leaving the institution to the appropriate designated institution official.

Prior to arrival of visitor on campus, the faculty sponsor must require and have in place either a fully executed Visiting Scientist Agreement or Visiting Scholars Agreement.

When you begin to draft your Visiting Scientist/Scholars agreements what issues should be covered and what clauses should be included? The Visiting Scientist/Scholar Agreement should:

◆ identify the visiting scientist/scholar by name, identify name of home institution, state period of time requested, identify name of faculty sponsor and faculty sponsor’s department, and include a brief description of planned activities
◆ clearly define the scope of the visitor’s work, training, and/or observation
◆ identify the visitor’s status as a non-employee who is not entitled to compensation or benefits
◆ indicate that the visitor is supported either by home institution or personally
◆ assert that the visitor is subject to institutional policies, including intellectual property policies
◆ require that the visitor agrees to maintain confidentiality of information observed outside the visitor’s work scope
◆ require the visitor to take any necessary training
◆ oblige the visitor and/or home institution to assume liability for “injuries to people or property resulting from my acts”
◆ require signatures by the visitor and home organization
◆ require the home organization to acknowledge the visit of its faculty and/or student by signing the VSA, and acknowledge the necessity of their faculty/student to comply with institution’s intellectual property terms

What are the different requirements for a Visiting Scientist versus a Visiting Scholar? In most instances a Visiting Scientist will gain access to an institution’s laboratory and may participate in third party funded research, e.g. from the federal government or supported by a for profit sponsor award. For the Visiting Scientist the Agreement has two parts – Part A includes language that describes how the Visiting Scientist is required to comply with all of the institution’s policies and acquire training when required. Part B is focused solely on the requirements and management of intellectual property that may result during the time the Visiting Scientist is on campus. Part B requires that all data, results, reports and intellectual property developed during the Visiting Scientist’s time on campus will be the owned and property of the institution.

For a Visiting Scholar whose sole purpose is to receive specific training or be involved in an observation-based training program only Part A of the VSA is required.
For International Visiting Scientists/Scholars before finalizing the VSA there are additional reviews and evaluations that are required that include:

◆ Export Control review especially for visiting scientists/scholars travelling from embargoed or sanctioned countries
◆ Immigration status and whether it is appropriate for the proposed activities
◆ Determination that the visitor has the appropriate visa that allows entry into the United States

What are the areas of main concern for an institution when visitors are allowed to spend time on campus? Obviously the potential of institution liability as well as the inability to discipline visiting scientists or scholars may be of concern.

In summary, having a Visiting Scientist/Scholars policy, procedure and agreement in place will provide institutions with more control over individuals who are on campus for an extended period of time, will allow institutions to be aware of who is a visitor on campus, where the individual is located, length of the visitor’s stay, and also puts the visitor on notice of the requirement to comply with the institution’s policies, and in particular with the management and ownership of intellectual property.

This section is based on the University of Maryland Baltimore (UMB) Visiting Scientist Policy and Agreements. Information about UMB’s Visiting Scientist/Scholar Policy and Agreement templates may be found at the following link:

http://www.umaryland.edu/ord/export-compliance/procedures/international-visitors/
1960 Statistics and Survey Results

This section includes statistics and survey results from authoritative sources relating to data rights and intellectual property.

1960.1 Trends in University Patenting Activities

AIS editors

The National Science Board’s Science and Engineering Indicators provides “a broad base of quantitative information on the U.S. and international science and engineering enterprise.” One set of data pertains to university patenting trends and could prove of interest to research administrators and technology licensing professionals alike.

According to U.S. Patent and Trademark Office (USPTO) data, patent grants to universities and colleges increased sharply from 1988 to about 1999, when they peaked at just under 3,700 patents, and then fell to about 3,000 in 2008 (see Figure 1960.1-1). Three technology areas have dominated these patent awards (chemistry, biotechnology, and pharmaceuticals), accounting for 45% of the total patents awarded to U.S. universities in 2008 (see Figure 1960.1-2).

According to the Association of University Technology Managers, “Despite continuing difficult economic conditions, … [s]tartup formation and the number of licenses and options executed to startups showed healthy increases over FY 2009, as did the number of startups that remained active at the end of the fiscal year. FY 2010 also saw a significant increase in total research expenditures and the highest increase in patents issued since AUTM began collecting this data 17 years ago.” Data from the AUTM U.S. Licensing Activity Survey: FY2010 found the following types of activity at respondents to its survey including 155 universities, 27 hospitals and research institutes, and one third-party technology investment firm:

- 657 new commercial products introduced
- 5,362 total license and options executed, 4,284 of which were licenses
- 651 new companies formed
- 3,657 startup companies still operating as of the end of FY 2010
- $59.1 billion total sponsored research expenditures
- 20,642 disclosures
- $2.4 billion total licensing income

Patents

- 18,712 total U.S. patent applications
- 12,281 new U.S. patent applications
- 1,116 non-U.S. patent applications
- 4,469 issued U.S. patents
AUTM is a nonprofit association of academic technology transfer professionals. For more about the AUTM licensing survey, go to www.autm.org (see also Figure 1960.1-3 and Figure 1960.1-4).


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<th>1995–2010</th>
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Notes: Data include institutions affiliated with academic institutions, such as university and alumni organizations, foundations, and university associations. Fewer than 200 institutions shown because data for certain institutions are for entire university system and incorporate data from various campuses. Patents assigned to Naval Postgraduate School and Air Force Academy not shown here. Top 200 R&D institutions ranked by sum of their patents from 1998 through 2010. Unlike some previous versions of this table, data include all assignees on patent, not just first; therefore, patent counts in this table are slightly higher than reported in some previous years. Patents on whole-count basis, that is, each assignee on patent credited one count.

### Figure 1960.1-2: U.S. University Patent Awards by Technology Area, 1990–2010

<table>
<thead>
<tr>
<th>Technology Area</th>
<th>Number of Patents</th>
</tr>
</thead>
<tbody>
<tr>
<td>All university patents</td>
<td>59,608</td>
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<tr>
<td>Biotechnology</td>
<td>16,546</td>
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<tr>
<td>Pharmaceuticals</td>
<td>7,147</td>
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<tr>
<td>Measurement techniques and instrumentation</td>
<td>4,650</td>
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<tr>
<td>Materials</td>
<td>2,886</td>
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<tr>
<td>Medical equipment</td>
<td>2,859</td>
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<tr>
<td>Semiconductors</td>
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<tr>
<td>Optics</td>
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<td>Chemicals</td>
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<td>Power generation and distribution</td>
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<td>Industrial machinery and tools</td>
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<td>Computer systems</td>
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<td>Automation and control</td>
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<td>Personal care and household goods</td>
<td>368</td>
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<tr>
<td>Electrical components and equipment</td>
<td>363</td>
</tr>
<tr>
<td>Audio-visual electronics</td>
<td>360</td>
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<tr>
<td>Motor vehicles and parts</td>
<td>333</td>
</tr>
<tr>
<td>Networking</td>
<td>332</td>
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<td>Aerospace and defense</td>
<td>244</td>
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<tr>
<td>Industrial manufacturing</td>
<td>217</td>
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<tr>
<td>Oil and gas, mining</td>
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<tr>
<td>Construction and building components</td>
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<td>Civil engineering</td>
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<td>Household appliances and lighting</td>
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<td>Recreation and sports equipment</td>
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<tr>
<td>Office equipment</td>
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<td>Other transport</td>
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<tr>
<td>Other</td>
<td>240</td>
</tr>
</tbody>
</table>

Notes: Data include institutions affiliated with academic institutions, such as university and alumni organizations, foundations, and university associations. Universities vary in how patents are assigned, e.g., to boards of regents, individual campuses, or entities with or without affiliation with university. The Patent BoardTM technology areas constitute an application-oriented classification system that maps the thousands of International Patent Classes (IPCs) at main group level into 1 of 35 technology areas. If patent has more than one IPC, only primary IPC is considered in mapping. Data in table not comparable to previous versions due to changes in classification system.

Figure 1960.1-3: Academic Patenting and Licensing Activities, 1991–2007

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<tr>
<th></th>
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<td>Net royaltiesa</td>
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<td>1,088.40</td>
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<td>38.8</td>
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<td>63.7</td>
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<td>101.3</td>
<td>109.2</td>
<td>119.1</td>
<td>121.5</td>
<td>136.3</td>
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<tr>
<td>Invention disclosures received</td>
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<td>11,259</td>
<td>12,638</td>
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<td>15,002</td>
<td>15,371</td>
<td>16,855</td>
<td>17,677</td>
<td>17,694</td>
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<td>New U.S. patent applications filed</td>
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<td>9,462</td>
<td>10,748</td>
<td>10,899</td>
<td>11,197</td>
<td>11,260</td>
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<td>402</td>
<td>364</td>
<td>348</td>
<td>425</td>
<td>418</td>
<td>500</td>
<td>510</td>
<td>549</td>
<td>555</td>
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<td>Operational startups</td>
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<td>Active licenses</td>
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<td></td>
<td></td>
<td></td>
<td>28,516</td>
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<td>New licenses/options executedb</td>
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<td>3,855</td>
<td>4,087</td>
<td>4,201</td>
<td>4,192</td>
<td>4,419</td>
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<td>328</td>
<td>373</td>
<td>316</td>
<td>318</td>
<td>278</td>
<td>357</td>
<td>377</td>
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<tr>
<td>Net royaltiesa</td>
<td>NA</td>
<td>NA</td>
<td>195</td>
<td>217.4</td>
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<td>290.1</td>
<td>391.1</td>
<td>517.3</td>
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<td>265.9</td>
<td>299.1</td>
<td>365.2</td>
<td>482.8</td>
<td>613.6</td>
<td>675.5</td>
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<td>NA</td>
<td>19.5</td>
<td>20.8</td>
<td>25.6</td>
<td>28.6</td>
<td>36.2</td>
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<td>Invention disclosures received</td>
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<tr>
<td>Revenue-generating licenses/options</td>
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<tr>
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<td>1,737</td>
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<td>2,142</td>
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<td>2,707</td>
<td>3,078</td>
<td>3,295</td>
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<tr>
<td>Equity licenses/options</td>
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<td>NA</td>
<td>99</td>
<td>113</td>
<td>203</td>
<td>210</td>
<td>181</td>
<td></td>
</tr>
</tbody>
</table>

a One-year spikes in royalty data reflect extraordinary one-time payments.
b Data prior to 2004 may not be comparable with data for 2004 and beyond due to change in survey wording.

Notes: Number of institutions reporting given in parentheses. Data from nonuniversity hospitals and medical institutes not included. Responding institutions may report for any 12-month period ending in the identified year.

Figure 1960.1-4: Median Net Royalties From Academic Patenting Activities, 1996–2005

Data Source: Association of University Technology Managers, AUTM Licensing Survey (various years).

Figure 1960.1-5: U.S. Academic Share of Patenting by U.S. Private and Nonprofit Sectors: 1981-2005

Notes: Patents issued by U.S. Patent and Trademark Office (USPTO) to U.S. universities and corporations. U.S. private and nonprofit sectors include U.S. corporations (issued bulk of patents in this category), nonprofits, small businesses, and educational institutions.
Assessing Technology Transfer Performance
Richard Kordal and Leslie K. Guice, Louisiana Tech University

Abstract
This paper presents an analysis of the Association of University Technology Managers (AUTM) annual U.S. Licensing Activity Survey data for 2007. Before performing the analysis, the institutions were first categorized into three “peer” groups (large, medium, or small) based on size of research expenditures so that more appropriate comparisons could be made. To assist in the interpretation of the results, we suggest some factors that may affect institutional performance in certain areas.

Introduction
Each year when the Association of University Technology Managers (AUTM) annual survey results are published, invariably the statistic that generates the most interest is the level of royalty income generated by universities. Despite mission statements that may not place royalty income at the top of the list (e.g., instead, open innovation may be a primary goal) many university administrators, state officials, and policy makers nonetheless often use that statistic as the key measure of an institution’s technology transfer performance. For the reasons elaborated below (as do many practitioners) believe it is difficult to use royalty income alone as the sole measure of technology transfer performance.

Nearly two decades of AUTM survey data have shown that a large money-making license is a relatively rare event: only about 0.5% of active license agreements generate over $1 million in royalty income (endnote #1), and most generate much less. Income is more a function of “hitting the grand slam,” i.e., being in the fortunate position of having licensed a technology that is a huge commercial success or negotiating an equity deal to a company whose stock greatly appreciates. Although skill in negotiating the deal is critically important (to be in a position to capture the value from the intellectual property [IP]), what is also important is having as many high-quality “technologies” as possible in play. This “portfolio approach” helps to increase the odds of “winning the lottery.” For example, the average ratio of license + option agreements executed in a given year to invention disclosures is about 1:5 (actual median percentage was 18.9% for all U.S. academic institutions responding to the 2007 AUTM survey). This implies that an institution receiving 100 disclosures per year should expect on average to negotiate about 20 licenses and option agreements per year. (This does not necessarily mean that 20% of all disclosures received will eventually get licensed because some, perhaps many, of the licenses executed in a given year may be based on technologies disclosed in previous years.) As mentioned above, only about 0.5% of all license agreements are “home runs” (million dollar royalty generators), and fewer still are “grand slams.” Therefore, for every 200

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1 This article is reprinted from Research Management Review, Vol. 16, No. 1, Fall/Winter 2008, published by the National Council of University Research Administrators. It is used with permission of the publisher.
active license agreements the expectation is that one will be a “home run.” Assuming half of the 20 agreements executed above were license agreements and the volume of disclosures (100/year) and deal flow remain constant (10 licenses/year), the expectation is that this hypothetical institution will have a “grand slam” roughly once every 10–20 years (1 home run = 0.005 x 10 license/yr. x 20 yrs.).

Based on the above analysis of the infrequent nature of “grand slam” licenses, it stands to reason that there should be a correlation between total number of active royalty-yielding licenses and options that an institution holds and royalty income. One would expect that the higher the number of active options and licenses, the greater the royalty income because the more active agreements in play, the greater the odds that one will be a home run. Indeed, there is a correlation, albeit not a very strong one (see Figures 1 and 2). Figures 1 and 2 are identical except that Figure 1 includes New York University’s exceptional income of $791,210,587 for 2007 and Figure 2 does not.

**Figure 1. Income vs. Number Active Licenses/Options (with outlier)**
A similar correlation is seen if one compares aggregate income over the previous five years versus the number of active licenses/options. See Figures 3 and 4, which are identical except that Figure 3 includes two outliers and Figure 4 does not.
This rough correlation may just be reflective of the unpredictable nature of the marketplace and stock market, which is beyond the control of the technology transfer office. To some extent, due to external factors (e.g., advent of a disruptive technology, shift in trade policy, availability of risk capital), marketplace success is even beyond the control of company managers (no one can guarantee success — at best, all one can do is estimate the probability for R&D, regulatory, and commercial success).

If royalty income or ROI alone is not a good measure of assessing technology transfer performance, what is? We do not believe any one measure is sufficient; rather, it is our opinion that a number of metrics need to be assessed, such as volume of disclosures (cultural measure), evaluation of commercial potential, patent/legal expense management, marketing effectiveness, number of industry partners/contracts, etc., in order to develop a more complete picture of performance. Only by looking at all the aspects of technology transfer can one draw any meaningful conclusions. (Most important is how well the public is benefiting from the new innovations being developed at the country’s academic and non-profit institutions. This is not something that can be easily quantified, although AUTM is attempting to do so in a qualitative manner through their excellent series of Better World Reports.)

Using the most recent 2007 AUTM survey data (AUTM, 2007) (for the purpose of this analysis it was not important which survey year’s data were used), we dug a little deeper. At the risk of being compared to a paleontologist who, using just fragmentary fossil remains, makes big leaps or deductions about the lives and habits of dinosaurs, we attempted to see what conclusions we could tease out of the data. Before conducting the analysis, the academic institutions being surveyed were first grouped into three categories (large >$250 million R&D expenditures, medium >$75 million <$250 million, or small >$10 million <$75 million) based on size of research.
enterprise. It may be inappropriate to compare institutions with widely varying sizes of their research enterprise (e.g., Johns Hopkins University, which had $1.1 billion in R&D expenditures in 2007, to Duquesne University, which had $11 million in R&D expenditures). In our opinion it is more appropriate to compare institutions among their peers.

While it is difficult to make firm conclusions based on the analysis of just one year’s compilation of technology transfer performance statistics (arguably 5 year cumulative data might be more instructive), some interesting observations were made. Some of the observations raise additional questions that may require collecting additional information not found in the current survey. Getting answers to these questions will also require an honest appraisal of the technology transfer offices themselves as well as external factors affecting the offices’ performance.

It is hoped that this analysis will aid others (in particular VP Research, policy makers, etc.) in assessing their institution’s technology transfer operations and prompt them to delve deeper into what might be the cause of any major deviations from the norm. For example, an institution may have a high reimbursement rate for patent/legal expenses that ordinarily would be viewed as a positive. However, it could also mean that the institution has an aversion to risking its own money on patent applications and may only file if they have a licensee or optionee willing to foot the bill. While this cautious approach may make sense for some institutions and appear on the surface that the office is managing their patent/legal budget wisely, it will undoubtedly limit the portfolio of patent protected technologies available for licensing, and hence the opportunity for future royalty income.

**Analysis of 2007 AUTM Data by Institution Size**

Table 1 shows the median, maximum, and minimum values calculated for a variety of technology transfer metrics. Median rather than average values were determined because we did not want any outliers to skew the results and give a false picture of typical performance. According to the table, most institutions average approximately four new invention disclosures per $10 million in R&D expenditures. The rate is slightly greater for the smaller institutions. Disclosure rate is indicative of an institution’s innovation productivity or culture. A low disclosure rate may mean that more educational and outreach activity is needed to encourage researchers to seek opportunities for patentable innovations in their research. Or it may simply mean that the type of research being conducted is not conducive to inventions — e.g., more behavioral or clinical research rather than scientific or engineering research. It may also mean that the faculty do not hold the view that participation in technology transfer helps advance their careers (reappointment, tenure, and promotion). To get a better understanding of the reason for “atypical” results, either positive or negative, one would have to investigate the cause of either the lower or higher than norm productivity. Top performers in FY 2007 are shown in Table 2.
Table 1. Technology Transfer Metrics

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<th>Size of Institution²</th>
<th>Statistic</th>
<th>Disclosures/ $10 MM R&amp;D</th>
<th>Start-ups/ $100 MM R&amp;D</th>
<th>ROI³</th>
<th>% Patents filed/ Disclosure</th>
<th>% Issued patents/ Disclosure</th>
<th>% Licensee &amp; Optionee/ Disclosure</th>
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</thead>
<tbody>
<tr>
<td>Large</td>
<td>Median</td>
<td>3.6</td>
<td>0.9</td>
<td>1.5%</td>
<td>49.7%</td>
<td>18.8%</td>
<td>23.6%</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>14.4</td>
<td>6.6</td>
<td>265.6%</td>
<td>131.8%</td>
<td>46.8%</td>
<td>111.6%</td>
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<tr>
<td></td>
<td>Min</td>
<td>1.6</td>
<td>0</td>
<td>0.1%</td>
<td>22.0%</td>
<td>5.0%</td>
<td>8.1%</td>
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<tr>
<td>Medium</td>
<td>Median</td>
<td>4.0</td>
<td>1.3</td>
<td>0.6%</td>
<td>59.6%</td>
<td>16.9%</td>
<td>17.8%</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>10.0</td>
<td>5.2</td>
<td>38.4%</td>
<td>267.6%</td>
<td>85.0%</td>
<td>172.9%</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>0.9</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Small</td>
<td>Median</td>
<td>5.1</td>
<td>1.9</td>
<td>0.6%</td>
<td>62.5%</td>
<td>13.3%</td>
<td>13.7%</td>
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<tr>
<td></td>
<td>Max</td>
<td>38.6</td>
<td>22.9</td>
<td>15.4%</td>
<td>383.3%</td>
<td>50.0%</td>
<td>100.0%</td>
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<tr>
<td></td>
<td>Min</td>
<td>0.6</td>
<td>0</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

¹ Calculated from AUTM 2007 Annual Survey data
² Size: Large >$250 MM R&D; Medium >$75 MM <$250 MM; Small <$75 MM
³ ROI – Return on Investment ((license income/R&D expend)*100)
⁴ Large ROI due in part to one time event, i.e., NYU partial royalty cash out

Table 2. Ranking Disclosure/$10 Million R&D Expenditures

<table>
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<th>Category</th>
<th>Rank</th>
<th>Institution</th>
<th>Statistic</th>
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<td>1</td>
<td>Calif. Inst. Tech</td>
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<tr>
<td></td>
<td>2</td>
<td>U. Florida</td>
<td>6.9</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>U. Utah</td>
<td>6.9</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Georgia Inst. Tech</td>
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</tr>
<tr>
<td></td>
<td>5</td>
<td>Stanford U</td>
<td>5.7</td>
</tr>
<tr>
<td>Medium</td>
<td>1</td>
<td>Drexel U.</td>
<td>10.0</td>
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<tr>
<td></td>
<td>2</td>
<td>Rice U.</td>
<td>9.7</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>U. Central Florida</td>
<td>9.5</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>NJ Inst. Tech.</td>
<td>8.2</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>U. Virginia</td>
<td>8.0</td>
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<tr>
<td>Small</td>
<td>1</td>
<td>Brigham Young U.</td>
<td>38.6</td>
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<tr>
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<td>2</td>
<td>Louisiana Tech U.</td>
<td>22.6</td>
</tr>
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<td>3</td>
<td>UNC Charlotte</td>
<td>16.8</td>
</tr>
<tr>
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<td>4</td>
<td>Ohio U.</td>
<td>15.0</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Rensselaer U.</td>
<td>15.0</td>
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</tbody>
</table>

One area in which the larger, more prestigious universities seem to out-perform the medium and smaller universities is in Return on Investment (ROI) or royalty income as a percentage of R&D expenditures. There could be a number of explanations for this. First, larger institutions have typically put more technologies “in play” over the years and are now reaping the benefits of this increased activity. They were the first to get heavily involved in technology transfer after the passage of the Bayh-Dole...
legislation and due to their large R&D expenditures have received more disclosures and executed a greater number of license agreements.

Alternatively, larger institutions may have more entrepreneurial-minded and/or inventive faculty who disclose higher-quality or more valuable inventions (e.g., Eminent Scholars, Nobel Laureates, National Academy of Science members, large grant recipients, etc.) than the smaller and medium institutions. These faculty members are sometimes referred to as “star” faculty and are in high demand and heavily recruited. It would be interesting to see if there is a correlation between the number of star faculty at an institution and the royalty income or scientific impact (citation rate) of an institution’s inventor’s publications (patents and related journal articles) and royalty income.

The performance of more prestigious universities could be due to the “halo” effect of the institution. Sine et al. (2003) have found that after controlling for other factors, a one-unit increase in an institution’s *U.S. News and World Report* ranking increased the rate of licensing by 1.5%. (This is not to imply that the less well-known universities cannot be successful at technology transfer. To the contrary, a recent report funded by the National Science Foundation showed that some small and medium-sized institutions can excel at technology transfer [Palmintera et al., 2007].)

The success of larger institutions could also be attributed to having received more technologies that could be the basis of a start-up company. If they take equity in these start-up companies, then they may be benefiting from these equity positions disproportionately (Bray & Lee, 1988). It is well known that only a small percentage (on the order of 2–3%) of disclosures are broad, wide, and deep enough to be the basis of a venture-backed start-up company. An institution receiving 20–30 disclosures each year may only see one platform technology occasionally, whereas an institution that receives hundreds per year may see several suitable candidates each year.

But most probably there is no one single reason for their high performance; rather, it is probably due to a variety of factors. Differences in university technology transfer performance have been the subject of several scholarly articles (Siegel et al., 2007; Thursby & Kemp, 2002). Among others, some of the top contributing factors include: presence or absence of a medical school, private or public institution, and cultural and faculty incentive structure. Top performers in this category are shown in Table 3.

External factors that could affect the ROI metric is the university’s position or philosophy in terms of IP rights in research grants and contracts and/or material transfer agreements (MTAs). If an institution has a high number of active license and option agreements in place (in particular, industry agreements) but is yielding low royalty income from them, one might want to check the IP provisions in the underlying research agreements and MTAs (if there are many) to see how much opportunity is available to benefit from the university’s inventions. For example, there has been a recent trend among charitable foundations to require that a royalty-sharing provision be included in their contracts as a condition of receiving their grant. While this may be understandable from the standpoint of the foundation, the net effect is to reduce the amount of income that would otherwise come to the university. Some institu-
tions have made the value judgment that research dollars today are more important than royalty income they might receive from hypothetical IP tomorrow. High royalty income and generous IP rights to sponsors usually do not go hand in hand.

The important role played by universities in economic development is well recognized by most state government leaders, policy makers and the general public. One easily quantifiable measure is the number of new start-up companies spun out of the universities annually. Table 4 shows some of the top performers in this category in 2007, normalized for R&D expenditures. Start-up activity is not only a measure of an institution’s innovation productivity but also the whole entrepreneurial ecosystem that has been developed in the area in which it is located. This ecosystem makes it possible for the innovations to be translated into new business and the nascent companies to be nurtured until they can stand on their own. In addition to new technology, start-ups require capital, experienced business professionals, skilled workers, and other resources often in short supply. The technology is only one component in the chain.

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
<th>Institution</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>1</td>
<td>NYU</td>
<td>265.6%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Northwestern U.</td>
<td>23.6%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Columbia U.</td>
<td>21.9%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>U. Rochester</td>
<td>14.9%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>U. Minnesota</td>
<td>11.6%</td>
</tr>
<tr>
<td>Medium</td>
<td>1</td>
<td>Wake Forest U.</td>
<td>38.4%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Iowa State U.</td>
<td>7.3%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>U. Oregon</td>
<td>5.2%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Tulane U.</td>
<td>4.1%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Carnegie-Mellon U.</td>
<td>2.5%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Tufts U</td>
<td>2.5%</td>
</tr>
<tr>
<td>Small</td>
<td>1</td>
<td>Ohio U.</td>
<td>15.4%</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>U. Akron</td>
<td>12.5%</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Brigham Young U</td>
<td>9.2%</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>U. South Alabama</td>
<td>9.0%</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Eastern Virginia Med.</td>
<td>3.2%</td>
</tr>
</tbody>
</table>
Table 4. Ranking Start-Ups/$100 MM R&D Expenditures

<table>
<thead>
<tr>
<th>Category</th>
<th>Rank</th>
<th>Institution</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>1</td>
<td>U. Utah</td>
<td>6.6</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Northwestern U.</td>
<td>2.8</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Calif. Inst. Tech.</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>U. Md., College Park</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Colorado State U.</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>NYU</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>MIT</td>
<td>2</td>
</tr>
<tr>
<td>Medium</td>
<td>1</td>
<td>U. Kentucky</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>U. Alabama</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Rice U.</td>
<td>4.9</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>U. New Mexico</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Drexel U.</td>
<td>4</td>
</tr>
<tr>
<td>Small</td>
<td>1</td>
<td>Brigham Young U.</td>
<td>22.9</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Louisiana Tech. U.</td>
<td>14.1</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Stevens Inst. Tech.</td>
<td>10.2</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>U. Texas Arlington</td>
<td>7.6</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Mich. Tech. Inst.</td>
<td>5.3</td>
</tr>
</tbody>
</table>

Over the years we have seen a steady increase in the percentage of disclosures that are drafted into patent applications. Today, it appears that most universities (large, medium and small) are filing patent applications on roughly half of their incoming disclosures. Interestingly, the small and medium institutions are filing a slightly larger percentage of patents than the larger universities (~60% for small and medium vs. 50% for large institutions) — see Table 1. This increase may be due to in part to the ability to file inexpensive provisional applications. There seems to be a growing tendency to file first and then see what interest the technology generates from the market and/or assess it for patentability and commercial potential. At one extreme, Cal Tech files a provisional application on virtually every new disclosure (endnote #2). While there may be merits to this approach it still requires the expenditure of some funds for legal services and it may delay the often difficult regular patent filing decision. Sometimes it can be more difficult to abandon a pending patent than not to file one in the first place. On the other hand, this strategy can pay off if a licensee is found that is willing to pay for the conversion.

As Table 1 indicated, the large and medium institutions have better success at getting their inventions licensed or optioned (23.6% and 17.8%, respectively) than the smaller universities (13.7%). This trend is consistent with the %issued patents/disclosure ratio — 18.8%, 16.9%, and 13.3%, respectively. It may reflect the fact that companies prefer to license patented technologies rather than unpatented or patent pending technologies.

Interestingly the larger institutions have a greater percentage of their patent/legal expenses reimbursed by their licensees (46.6%) than the medium and smaller institutions
(27.9% and 10.6%, respectively) — see Table 5.

One explanation might be that the larger institutions license a relatively greater percentage of their technologies (see above). This is not too surprising since it is very common for the licensor to ask an exclusive licensee to reimburse them for their patent expenses. Alternatively, smaller institutions may be doing more non-exclusive licenses which generally do not bring full reimbursements.

Table 5. Legal Expenses

<table>
<thead>
<tr>
<th>Size of Institution</th>
<th>Statistic</th>
<th>% Reimbursed</th>
<th>Legal Expend./Patents Filed</th>
<th>Net Legal Expend./Patents Filed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large</td>
<td>Median</td>
<td>46.6%</td>
<td>$25,848</td>
<td>$13,394</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>136.0%</td>
<td>118,486</td>
<td>73,271</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>12.5%</td>
<td>1,718</td>
<td>(2,518)</td>
</tr>
<tr>
<td>Medium</td>
<td>Median</td>
<td>27.9%</td>
<td>$18,477</td>
<td>$12,067</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>89.4%</td>
<td>141,921</td>
<td>127,067</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>0.0%</td>
<td>2,337</td>
<td>1,786</td>
</tr>
<tr>
<td>Small</td>
<td>Median</td>
<td>10.6%</td>
<td>$12,070</td>
<td>$8,731</td>
</tr>
<tr>
<td></td>
<td>Max</td>
<td>90.1%</td>
<td>164,546</td>
<td>88,822</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>0.0%</td>
<td>2,052</td>
<td>1,228</td>
</tr>
</tbody>
</table>

To get a rough estimate of how much institutions are paying for patent filings, we divided the total amount of money the institution spent on patent/legal expenses by the number of new U.S. patents filed. Granted, not all the money is spent only on the preparation and prosecution of a new patent. Some is spent on maintenance fees for issued patents, foreign filings, continued prosecution of previously filed patents, etc. Nevertheless, it does provide a first approximation of what institutions are paying for a patent application. Worthy of note is that the larger institutions are paying more than the smaller institutions. This is true even if one subtracts for reimbursements. The amount spent per new application is still higher for the large institutions compared to the smaller institutions. While a high number may signal that an institution is paying top dollar for patent/legal services in an effort to get high-quality IP protection, it could also just mean that they incurred some extraordinary expenses that year — e.g., expenses related to a patent infringement lawsuit. Ordinarily, one would think that a low number is better. If it is too low, however, it may be a sign that the institution is filing a high percentage of inexpensive provisional patents. It could also mean that they have hired in-house counsel and are having their staff attorneys write and prosecute the applications.

Two additional metrics not tracked by the AUTM survey but nonetheless useful in our estimation in assessing technology transfer performance are: 1) percentage of patented or patent pending technologies licensed, and 2) degree to which marketing solicitations generate follow-up requests for more information under a non-disclosure agreement (NDA). A high percentage for the first metric tells you whether you are placing your bets on the right technologies (risking your money on the most commercializable technologies). The second metric tells you whether you are marketing your technologies to the right targets. For example, a high response would
indicate that you are hitting the mark and doing a good job at market research. (One caveat, however, is that in general it is less difficult to market and license major discoveries made by pre-eminent scientists. Often industry technology scouts come looking for these types of discoveries and little marketing effort is needed. But if conducted, the marketing of these high profile cases will generally result in a high response rate. In some respects, then, it is more impressive to see an office that is successful in marketing and out-licensing a significant but yet non-revolutionary innovation, by a novice researcher without a strong track record. Finding a home for these types of technologies can often be more challenging.)

As the author Fletcher Knebel once said, “smoking is one of the leading causes of statistics.” A corollary might be “technology transfer is one of the leading causes of statistics.” To draw any meaningful conclusions about technology transfer performance, one must take care in interpreting the data. Many parameters can be used to assess the performance of a technology transfer operation. Each parameter provides a measure of a different facet of the office and institution. However, unless one delves beneath the surface to understand the factors that may be affecting these parameters, they will be left with a superficial understanding of the office’s operation. Obviously, it takes more than one year’s worth of data to make a fair assessment of an office, particularly for new offices just getting started in technology transfer (endnote #3). In performing this analysis we did not attempt to account for differences in staffing (level or experience) or budget (e.g., patent/legal budget) which naturally will affect overall performance.

In conclusion, it is our opinion that comparisons between institutions should be done in relation to their peer groups (as Frederick Douglas once said, “You are not judged on the height you have risen but from the depth which you have climbed”). Furthermore, top-line statistical data can sometimes be misleading and lead to erroneous conclusions unless analyses are conducted in view of performance factors. Ultimately, technology transfer offices should be evaluated in terms of the overriding mission of the university and the primary goal that it is trying to achieve through technology transfer, which can differ from institution to institution (e.g., attract corporate research dollars, generate discretionary income, promote regional economic development, benefit the public, etc.). So while comparisons can be made, each office inevitably must function as best suits the institution in which it is housed.

Endnotes

1. Association of University Technology Managers. (2003). AUTM Licensing Survey. Figure US-28 (151/25,979 = 0.6%).

2. Statement by Lawrence Gilbert, J.D., M.B.A., Senior Director, California Institute of Technology, Office of Technology Transfer, during a presentation at AUTM Advanced Topics Course, December 6, 2008, New Orleans, LA.

3. Generally speaking, significant royalty income only comes after the licensed product has reached the market and grabbed market share. It may take offices new to the game 5–10 years before their licensed technology gets to this point. So it is expected that they will lag in royalty income for a while.
Literature Cited


Authors

Leslie K. Guice is Vice President for Research and Development, Louisiana Tech University. He received his Ph.D. in civil engineering at Texas A&M University. He previously served as Dean of the College of Engineering and Science at Louisiana Tech. At LTU, he oversees several engineering and science research centers as well as the intellectual property and commercialization activities at the University. His research activities have included studies in structures and materials. He has also led several National Science Foundation projects focused on technology commercialization. He is Chair of the State-wide Louisiana Optical Network Initiative (LONI) Management Council.

Richard Kordal is Director, Office of Intellectual Property and Commercialization, Louisiana Tech University. He earned a Ph.D. in Chemistry (biochemistry emphasis) from the University of California, Santa Barbara. He has 18 years’ experience in the in vitro diagnostics industry with Dade/Baxter, Boehringer Mannheim, Instrumentation Laboratory and Bionostics in various technical, supervisory and managerial positions, including industrial technology assessment. During his employment in industry he has taken more than 10 products through R&D into the market. Prior to joining Louisiana Tech University he was Director, Intellectual Property Office and University Patent Officer, University of Cincinnati. He is active in professional technology transfer organizations and currently serves as AUTM’s Assistant Vice President for Metrics and Survey (U.S.). He co-founded an Internet-based brokerage service, Techquisition.com, to make the marketing and acquisition of technology easier for both buyers (licensees) and sellers (licensors) of technology.
Knowledge Check

The Q&As at ¶1990.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 1900 has been understood. Note: For the answer key for ¶1990.1, see ¶1990.3, which appears on a separate page (page 1990:5) for testing purposes.

Discussion topics at ¶1990.2 are designed to engender dialogue among staff on general issues of importance in the field.

§1990.1 Q&As

1. Perhaps more than any other federal agency, which of the following has issued guidance and policy with respect to data generated in the conduct of funded research:
   (a) National Science Foundation
   (b) Department of Health and Human Services/National Institutes of Health
   (c) Office of Science and Technology Policy
   (d) Department of Health and Human Services/Office of Laboratory Animal Welfare

2. The Bayh-Dole Act is concerned principally with
   (a) Protection of human subjects in research
   (b) Ownership of intellectual property
   (c) Export controls
   (d) Data processing in federally funded research

3. A material transfer agreement typically covers all of the following EXCEPT:
   (a) Data rights
   (b) Research use of the material by the recipient
   (c) Liabilities and indemnification issues
   (d) Cost principles and cost transfers

4. All of the following are some typical material transfer agreement trouble spots EXCEPT:
   (a) Definition of the material
   (b) Rights to modifications and derivatives
   (c) Publication or confidentiality clauses
   (d) Name of principal investigator(s)
5. You typically would consult the DFARS if you had a contract with which of the following?
(a) Department of Education
(b) Defense Department
(c) NASA
(d) Veterans Affairs

6. Technology transfer as covered by an MTA is
(a) The commercial licensing of technologies and inventions
(b) Exporting controlled technology with an appropriate license
(c) Publishing proprietary and nonproprietary research results
(d) A license to conduct research on and send defense-related technology abroad

7. As used in Chapter 1900, what does NDA stand for?
(a) Negotiable data agreement
(b) Notice to desist agreement
(c) Negotiable data access
(d) Nondisclosure agreement

8. IRS Revenue Procedure 97-14 (“Guidelines for Research Agreements”) is applicable
(a) When sponsored research is conducted in facilities constructed in whole or in part with tax-exempt bond proceeds
(b) When sponsored research is conducted in facilities constructed in whole or in part with federal contract dollars
(c) When sponsored research is conducted in facilities constructed in whole or in part with federal award dollars
(d) When sponsored research is conducted in facilities outside the continental United States

9. As used in ¶1905, a license is basically
(a) A consideration or compensation paid to the licensor in exchange for certain rights in technology that the licensor is providing to the licensee
(b) Usually entered into as a subaward with a collaborating academic institution
(c) A grant of a right to use IP
(d) Any original investigation for the advancement of scientific knowledge not having a specific commercial objective
\section{Discussion Topics}

1. What, if any, special policies does your institution have for sharing research data and resources? Do the policies cover ownership, access, and retention? If yes, why? If no, why not?

2. What intellectual property issues might arise when negotiating and accepting research agreements from foundations and other private nonprofits that might differ from agreements involving federal and industry sponsors?

3. Sponsors often attempt to impose intellectual property terms in agreements that are generally unacceptable to institutions of higher education. Discuss what terms your institution might find objectionable and ways of dealing with them.

4. Where would you go for guidance on how to craft and implement effective institutional policies regarding inventions created at least in part with federal funds?

5. Briefly, what is meant by the following terms: patent, copyright, trademark, and trade secret?

6. Does your institution have an intellectual property policy, or are issues relating to intellectual property covered by various policies? If the latter, how do you coordinate protections afforded intellectual policies?

7. What is the relationship between conflict of interest and intellectual property?

8. What is technology transfer and how is it handled at your institution? What role, if any, does the research administration office policy?

9. How is intellectual property protected in the case of departing (transferring, retiring, etc.) principal investigators?

10. What is your policy with respect to data safety monitoring boards? That is, who can sit on them and are members compensated?

11. Does your institution have a research integrity office or official? If yes, what role does this person play in protecting data and intellectual property rights?
§1990.3  **Answer Key**

Following are the correct answers to the questions included at §1990.1.

1. (b) Department of Health and Human Services/National Institutes of Health
2. (b) Ownership of intellectual property
3. (d) Cost principles and cost transfers
4. (d) Name of principal investigator(s)
5. (b) Defense Department
6. (a) The commercial licensing of technologies and inventions
7. (d) Nondisclosure agreement
8. (a) When sponsored research is conducted in facilities constructed in whole or in part with tax-exempt bond proceeds
9. (c) A grant of a right to use IP
PLACE TAB

2100
Special Issues for Medical Schools
# Chapter 2100

## Special Issues for Academic Medical Centers

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  Gunta J. Liders, Associate Vice President for Research Administration, University of Rochester  
  Anthony Beckman, Senior Research Administrator, Office of Research and Project Administration, University of Rochester  
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¶2101 Introduction

This chapter addresses the special considerations for academic medical centers (AMCs) and their clinical research activities. It also provides insight into ways sponsored research administrators can handle these unique challenges.

Gunta Liders and Anthony Beckman of the University of Rochester introduce this topic by setting forth the mission of academic medical centers: patient care, research, and education. This unique tripartite mission makes the academic medical center different both from the other sectors of the typical university and from other hospitals and clinics that don’t have the teaching and research missions. The world of biomedical research has experienced unprecedented growth in recent years. This has created a series of both challenges and opportunities for medical schools and academic medical centers. In this chapter, the authors clearly and carefully outline the issues and problems that are unique to the academic medical center environment and discuss in detail the implications of each of these circumstances for the research administrator.

Liders and Beckman also provide illustrations of research administration challenges, e.g., use of human subjects, conflict of interest, and effort reporting, that are not limited to the academic medical centers. However, they effectively show how each of these challenges takes on new dimensions in this environment. Their review of this topic also includes information on some of the specific issues facing academic medical centers: human embryonic stem cell research, the Health Insurance Portability and Accountability Act (HIPAA), and the roles and responsibilities of affiliated hospitals. Liders and Beckman have provided an excellent diagnosis of the major research administration issues afflicting academic medical centers and also have offered a comprehensive list of resources, which, if properly implemented, will contribute to a full recovery.

This chapter will continue to respond to the information needs of research administrators at academic medical centers through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶2105, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at ¶2120), practical tools (at ¶2130), case studies (at ¶2140), and funding trends data and other related statistics (at ¶2160). A “knowledge check” containing Q&As and discussion topics is included at ¶2190.
Special Issues for Academic Medical Centers

Gunta J. Liders
Associate Vice President for Research Administration
University of Rochester

Anthony Beckman
Senior Research Administrator
Office of Research and Project Administration
University of Rochester

This chapter addresses special research administration issues for academic medical centers. Academic medical centers (AMC) have a traditional tripartite mission — patient care, research, and education. This distinguishes AMCs from other hospitals and clinics that are not as concerned with the latter two missions.

The very nature of biomedical research — which includes activities involving human subjects, industry-funded clinical trials, and other high-risk research — broadens, enhances, and complicates the issues for sponsored research administration in the AMC environment. In addition institutions that own their hospitals, or that are “covered entities” as defined under the Health Insurance Portability and Accountability Act (HIPAA), face additional requirements with which sponsored programs offices must be familiar.

This chapter discusses some critical issues for the AMC sponsored program office and provides some resources that could assist in helping to improve the administration of the institution’s sponsored programs. This chapter also provides an overview of organization, staffing, communication, and resource topics.

Note: A list of resources is included at the end of the chapter (see Figure 5).

Overview of Special Issues

The following are several unique issues that an office of sponsored programs (OSP) located in, or responsible for, a medical center may need to deal with

1. **Clinical faculty appointments and clinical practice compensation issues**: Medical centers must grapple with the concept of a clinical faculty appointment, or a faculty member that devotes his or her time to clinical, research, educational, and administrative duties. Because clinical compensation plans and administration of these plans can vary widely among medical centers, each institution must understand how its compensation plan “fits” within the existing regulations and how compliance is achieved.

2. **Clinical research**: The clinical research environment presents unique administrative, regulatory, and ethical challenges. Clinical research is defined by the National Institutes of Health (NIH) as “research conducted with human subjects (or on material of human origin such as tissues, specimens, or cognitive phenomena) for which an investigator directly interacts with human subjects. This area of patient-oriented research includes: i. development of new
technologies; ii. human disease mechanisms; iii. therapeutic interventions; and iv. clinical trials. Clinical research also includes epidemiological and behavioral studies and outcomes research and health services research.”

“Human subject” means a living individual about whom an investigator (whether professional or student) conducting research obtains (1) data through intervention or interaction with the individual, or (2) identifiable private information.

Clinical research also raises potential risks relating to clinical service billing. Billing for procedures, items or tests furnished to clinical research subjects is a complex task because (in addition to many other issues) of the need to determine whether a clinical service might qualify for insurance reimbursement and, if so, which costs are reimbursable by insurance and what approvals/dокументation/other requirements might be prerequisites to such billing. Potential fines and penalties for noncompliance with applicable policies may be substantial.

Clinical trials: Clinical trials are a subset of clinical research that involves the testing of drugs, devices, biologics, and behavioral or other interpersonal interventions in humans in order to determine their feasibility, efficacy, and side effects. Biomedical clinical trials of experimental drug, treatment, device, biologics or behavioral intervention may proceed through four phases. NIH defines these phases in the following manner:

◆ **Phase I** clinical trials test a new biomedical intervention in a small group of people (e.g., 20–80) for the first time to evaluate safety (e.g., to determine a safe dosage range and to identify side effects).

◆ **Phase II** clinical trials study the biomedical or behavioral intervention in a larger group of people (several hundred) to determine efficacy and to further evaluate its safety.

◆ **Phase III** studies investigate the efficacy of the biomedical or behavioral intervention in large groups of human subjects (from several hundred to several thousand) by comparing the intervention to other standard or experimental interventions as well as to monitor adverse effects, and to collect information that will allow the intervention to be used safely.

◆ **Phase IV** studies are conducted after the intervention has been marketed. These studies are designed to monitor effectiveness of the approved intervention in the general population and to collect information about any adverse effects associated with widespread use.

Typically academic medical centers are involved in phase II or phase III clinical trials; however, AMCs are increasingly engaged in early-stage clinical trials (pre-clinical and phase I) or even post-approval studies (phase IV).

(3) **HIPAA**: The regulations of the Health Insurance Portability and Accountability Act (HIPAA) govern the privacy and security of health information. HIPAA applies only to a medical center that is a “covered entity” or “a health care provider who transmits any protected health information in electronic form.”
Sponsored programs offices become involved with HIPAA when health care information is likely to be transmitted in the course of conducting sponsored programs.

(4) **Select agents and other high-risk biomedical research:** AMCs are more likely to engage in research with select agents than other types of universities. Select agents are a group of microorganisms and toxins that the Centers for Disease Control considers to have potential to pose substantial harm to human health. A parallel group of agents has been identified by the U.S. Department of Agriculture (USDA) as “High Consequence Livestock Pathogens and Toxins.” This is a group of microorganisms and toxins considered to have the potential to pose a severe threat to animals or to animal products. A list of these select agents can be found here:

There are other types of research that a sponsored programs office in a medical center may encounter, which may necessitate the creation of additional safeguards for review and tracking or additional oversight committees. This research could include human embryonic stem cell research or gene transfer research, or so-called dual use research.

(5) **Predominance of NIH funding:** The very high predominance of funding from one particular research sponsor creates a unique environment for a sponsored programs office at an AMC.

(6) **Relationships to affiliated hospitals:** The sponsored programs office’s relationship to its affiliated (but not owned) hospitals may be one that needs repeated clarification. Affiliated Veterans Affairs (VA) hospitals fall into this category and require the AMC to manage practical aspects of the relationship, such as the VA’s particular position on intellectual property conceived or reduced to practice in VA facilities.

Along with these unique issues, biomedical research accentuates some of the management challenges associated with conflict of interest, international partnerships, and subcontractors, and the management of multisite clinical studies. The liability associated with medical school activities and clinical trials research is significant, thus sponsored programs offices must engage in the proper processes that ensure appropriate legal review and risk management.

Finally the sense of urgency that sometimes accompanies biomedical research, such as clinical studies when critically ill subjects meeting the enrollment criteria may be waiting to receive an investigational drug or device, begs for a clear sense of office priorities.

Understanding key principles, practices, and external requirements is an essential component of effectively overseeing sponsored programs at an AMC. Separate discussions of key issues confronting OSPs at academic medical centers are included below.

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1 See [http://www.selectagents.gov/SelectAgentsandToxins.html](http://www.selectagents.gov/SelectAgentsandToxins.html)
¶2105.2 Organizational, Staffing, and Communication Issues

As noted, academic medical centers face unique issues which require attention from the office of sponsored programs. The diversity of organizational structures among academic medical centers only adds to this complexity. For instance, some universities have established separate sponsored programs offices for their medical centers that may have different reporting structures from the rest of the campus (e.g., such offices may report to the dean of the medical school or associate dean for research). This in and of itself may create organizational, staffing, and communication issues among two or more sponsored programs offices and for the institution at large.

Other universities choose to keep their sponsored programs offices centralized under one leadership (with dotted-line reporting or accountability to the university’s academic leaders), but retain at least two physical office locations to provide facilitated service to the various schools/colleges. For those institutions that do not have the ability to maintain two physical locations, or locate the central office directly within the medical center, it is imperative to find other methods for efficient service delivery between the sponsored programs office and medical center (e.g., swing space, courier service, frequent meetings or training sessions at other locations).

Accommodating NIH Funding

The predominance of National Institute of Health (NIH) funding also may impact a sponsored programs office, and how it is structured in order to accommodate and facilitate the heavy workloads that exist around standard proposal deadlines. Some offices been successful creating NIH “specialists” to be able to effectively address questions and problems related to NIH guidelines; others choose to cross-train all professional staff in order to enlist the greatest amount of human resource during these deadlines and ensure coverage during staff absences.

Communication with Other Groups

An OSP at an academic medical center will interact with a variety of institutional offices and personnel.

Regulatory Committees. Because of the emphasis on human and animal research issues, medical centers are required to create regulatory committees and offices to oversee the various regulatory aspects of biomedical research that are distinct from the OSP. While many of these committees and/or offices are critical to universities without medical schools, the regulatory requirements of biomedical research may require the following additional committees within an institutional setting: human use of radioisotopes committee, gene transfer oversight committee, and embryonic stem cell research oversight committee. The OSP needs to have an understanding of these committees, their missions, and the interface between and among offices.

Clinical Trial Offices. Many AMCs have established separate clinical trial offices to facilitate and increase clinical study activity. The organizational link to the sponsored programs office is critical, and a clear sense of the individual office roles and responsibilities must be fostered. Clinical trial offices may assume various roles,
whether it is to promote and facilitate clinical trial activity, to conduct oversight
or audit reviews to ensure that clinical studies are conducted and/or billed in a
compliant manner, to assist with the development of budgets, to negotiate the
terms and conditions of clinical trial agreements, or to monitor ongoing studies
with respect to recruitment and billing. Research compliance has become an
important focus of any clinical trial office and at some academic medical centers this
compliance monitoring role has been transitioned into its own office. (See: http://
medschool.duke.edu/compliance)

**Other Institutional Offices.** The AMC sponsored programs office must also have
clear organizational and communication links to the
◆ office of legal counsel (having one or two specified liaisons within this office is
  recommended),
◆ conflict of interest committee(s),
◆ hospital compliance office (if applicable),
◆ foundation relations/development,
◆ office of technology transfer,
◆ office of corporate alliances,
◆ public relations department, and
◆ medical library for the purposes of coordinating support for the faculty for
certain NIH policies, such as its public access policy, data sharing plans and
processes, etc.

It is not unusual for sponsored programs at an AMC to generate the second-larg-
est source of revenue after patient care revenue. Thus research activities play a ma-
jor role within the institution, and the sponsored programs office must be connected
to all the key players.

**Research Community.** Communication from the sponsored programs office to its
constituency (e.g., deans, faculty, administrators, study coordinators) is critical; this
basic principle does not differ from that of sponsored programs offices that are not
located in medical schools. Communication can be accomplished by the traditional
means, such as via listservs, newsletters, formal presentations, and workshops. This
communication does get more complicated when there are two or more sponsored
programs offices within the university, and the need for information is cross-divi-
sional.

Some medical centers have established intranets, or other dedicated communi-
cation vehicles. These could be extremely helpful to ensure control or security over
the information, but also prove to be somewhat limiting in transmitting communi-
cation that is vital to the entire university enterprise. Thus OSPs utilizing an intranet
or other electronic means for information dissemination should consider the scope
of the intended audience and use more traditional means of communication when
necessary. (For a full discussion of communications, see Chapter 500.)
Resources Required

Resources critical to the AMC sponsored programs office are largely identical to those needed by sponsored programs offices that are not located at medical centers — adequate staff (discussed above), technology, and expertise.

Technology

Because of the volume of research conducted with human and animal subjects, access in some form to limited portions of the databases of the regulatory committees is critical. For example, the Institutional Review Board (IRB) must maintain records of who has completed the educational requirement required by NIH in order to conduct human subjects research. It is imperative that sponsored programs office personnel maintain or have access to this information, preferably electronically. In other words, the institution could benefit from shared data or co-located databases that allow information exchange between both IRBs and OSPs.

The OSP database needs to accommodate data relating to many aspects of research and be able to produce reports on the use of certain materials, biohazards, etc. The OSP will need to complete periodic survey data, and it is not unusual for it to produce frequent reports for the following offices:

◆ Dean
◆ Budget
◆ Property accounting
◆ Development
◆ Hospital (if owned by the institution)
◆ Institutional Biosafety Committee
◆ Human Embryonic Stem Cell Oversight Committee
◆ Environmental Health and Safety Committee
◆ Radiation Safety Committee

In addition databases need to accommodate the types of research that would be conducted at medical centers, including fixed-price, per-subject clinical trials, and track the specific award mechanisms used by NIH (e.g., program project grants, training grants). It is critical that the data be exported to a central database or warehouse where academic units can generate their own reports.

Expertise

OSPs should ensure that they are signed up to receive notifications from the NIH Guide for Grants and Contracts, NIH NEXUS, American Association of Medical Colleges (AAMC) and other resources that provide timely information on changes in regulations and requirements that would impact the medical center environment (see Figure 5).

Educational programs offered by the OSP need to address the robustness and
complexities of the clinical regulatory environment and recognize the fact that departmental administrators may move from clinical to research responsibilities and not be familiar with the compliance requirements associated with research. Similarly OSP’s should ensure that they possess appropriate levels of expertise regarding the clinical enterprise and its operation to better facilitate clinical research endeavors.

OSP’s should anticipate that their staffing needs will be quite complex and require individuals with broad knowledge of sponsored programs and experience dealing with various sponsors and award mechanisms. Regardless of the scope of the OSP (in relation to the other offices noted above) staff will need to have a diverse skill set that includes the ability to develop budgets, negotiate legal terms, and build effective relationships with principal investigators.

‡2105.4 Human Subjects Research

Because the medical center environment focuses on biomedical and clinical research (much of it of greater than minimal risk), sponsored programs offices must ensure that roles and responsibilities of the IRB and the OSP itself are clearly understood by both parties. Included below are sample mission statements for the two offices.

Example

OSP: The Office of Sponsored Programs serves and guides the university on all aspects of sponsored programs administration by

- providing pre- and post-award services;
- providing stewardship of external sponsored funding;
- providing training and education; and
- maintaining information systems pertinent to research administration and funding.

IRB: The mission of the Institutional Review Board is to protect the rights and welfare of human research subjects at the university. To accomplish this, it reviews and approves the initiation of and reviews periodically research involving human subjects.

The roles of the IRB and OSP offices intersect, and the key points of human subjects research must be understood by the sponsored programs staff in order to properly respond to questions, negotiate agreements, and review synopses of proposed human subjects research in proposals and applications.

Working with the IRB

Periodic meetings between the sponsored programs and IRB staff are especially useful to educate the IRB staff on the grant proposal and award processes and to enlighten the sponsored programs staff on nuances of the regulations governing human subjects research. Universities’ IRBs are guided by the ethical principles described in The Belmont Report and by the regulations of the Food and Drug Administration (FDA) (21 CFR 50 and 56) and the Department of Health and Human Services (HHS) (45 CFR 46). (For information on where to find these and other
resources, see Figure 5.) Sponsored programs staff should be aware of these requirements. At the least, it is advisable that all professional sponsored programs staff in the mandatory and voluntary educational programs offered by the IRB. For an overview of the compliance requirements of human subjects research, see Figure 1.

**Figure 1: Identifying Human Subject Research**

The following was excerpted from the Investigator Handbook prepared by the University of Rochester (see [https://www.rochester.edu/ohsp/documents/ohsp/pdf/policiesAndGuidance/Policy_901_Investigator_Responsibilities.pdf](https://www.rochester.edu/ohsp/documents/ohsp/pdf/policiesAndGuidance/Policy_901_Investigator_Responsibilities.pdf). It is provided here as background on the Belmont Report and the basic ethical principles guiding human subject research. (Note: RSRB refers to the university’s Research Subjects Review Board.)

Human subject research is any activity that either:

- Meets the DHHS definition of research and involves human subjects as defined in the DHHS regulations; OR
- Meets the FDA definition of research and involves human subjects as defined in FDA regulations.
- Research as defined by DHHS regulations: A systematic investigation, including research development, testing and evaluation, designed to develop or contribute to generalizable knowledge. A “systematic investigation” generally means that there is a study plan/protocol that is followed. Contributing to “generalizable knowledge” means that there is or will be a report, publication, poster, communication, etc. that provides the results and conclusions of the research to other people/clinicians/researchers.
- Research as defined by FDA regulations: Any experiment that involves a test article and one or more human subjects, and that either must meet the requirements for prior submission to the FDA under section 505(i) or 520(g) of the act, or need not meet the requirements for prior submission to the FDA under these sections of the Food, Drug and Cosmetics Act, but the results of which are intended to be later submitted to, or held for inspection by, the FDA as part of an application for a research or marketing permit. For research involving drugs, an experiment is any use of a drug except for the use of a marketed drug in the course of medical practice.

As a means of highlighting some of the areas where both offices must work closely together, a series of scenarios is presented below.

**Examples**

#1 The grant administrator has received a proposal that indicates that the human subject research proposed is exempt from 45 CFR 46. There is no documentation that the IRB has reviewed this proposal. Is the certification from the investigator adequate?

#2 An investigator has submitted a protocol to the IRB that will be included in an NIH grant, and the application indicates that the inves-
tigator has a financial interest that could affect the proposed protocol. What should the IRB administrator do?

#3 The grants administrator is negotiating a subcontract that involves human subject research in a foreign country. This foreign entity’s negotiator will not accept governance by the regulations of the U.S. Department of Health and Human Services (45 CFR 46), but indicates that the regulations of the foreign country will prevail. What should the grants administrator do?

#4 The IRB has, unfortunately, discovered a serious lapse in an investigator’s conduct of a clinical study and has temporarily suspended the IRB approval of this investigator. What communication should take place between the IRB and the sponsored programs office?

While each academic medical center may have differing processes and practices to address the preceding scenarios, it is evident that a good working relationship between offices will help to ensure compliance with the applicable regulations and requirements, as well as facilitation of the issue at hand.

There are other, more informal ways that offices work together, such as referencing each other’s Web sites, providing reciprocal links to each office’s educational requirements and offerings, and assisting in the tracking of clinical research within the institution (as not all clinical research is sponsored by an external party). Both offices need to educate the community on “just-in-time” processes (e.g., sponsor requests for additional documentation and regulatory approvals are deferred until the proposal receives a fundable score) and when IRB review is expected and when it should occur. For instance, even though a sponsor may not require IRB approval at the time of the proposal, the institution may have determined that it will still review certain protocols prior to proposal submission, such as for gene transfer studies or if a principal investigator (PI) is not in good standing. Both the IRB and the OSP should be aware of and enforce institution-specific requirements.

Finally the importance of a strong relationship between the IRB and the OSP becomes apparent when an institution is applying for accreditation under the Association for the Accreditation of Human Research Protection Programs (AAHRPP) (see Figure 5). This exercise highlights how institutional policies and processes must work in concert to ensure full compliance with the regulations governing protection of human subject volunteers.

\(\texttt{2105.5 \hspace{1cm} Clinical Trials}\)

Clinical trials present additional challenges to the sponsored programs office. As noted above, some medical centers have clinical trial offices, and some of the responsibilities normally undertaken by the sponsored programs office may be placed in the clinical trials office. For purposes of this section, it is assumed that the sponsored programs office is responsible for negotiating the key terms and conditions of

\(^2\) See for example http://www.rochester.edu/ohsp/policies/guidanceDocuments.html
clinical trial agreements. These key negotiation provisions include payment (including noncancelable start-up costs, a per-patient fee, and other pass thorough costs), F&A costs, termination, publication, intellectual property, liability and indemnification, subject injury, confidentiality, and choice of law.

AMC negotiating positions on some of these provisions may differ depending on whether the clinical trial protocol is industry sponsored and industry initiated, or PI initiated. Sponsor-initiated studies are generally conducted by the AMC on behalf of the industry sponsor as a requirement of obtaining FDA approval for drugs or devices. Under this scenario, AMCs are generally reluctant to deviate from standard policies as the commercial sponsor will obtain in the full benefit of any work done by the AMC.

Investigator-initiated protocols are written and developed by an AMC faculty member, typically because the faculty member would like to investigate a hypothesis on an expanded or new use of an FDA-approved drug. In this case, the faculty member and AMC will file for the new drug or device application directly with the FDA, designating the AMC as study sponsor, and may need to consider absorbing additional risks by the institution. Oftentimes industry partners will participate in the investigator-initiated protocols by providing drug or supplies – but are unwilling to provide indemnification beyond the minimal manufacturing risk. Therefore the AMC will need to have a process in place for review and risk mitigation for the potential adverse event concerns.

**Contract Negotiations**

Clinical trials are an area where close communication between the OSP and other institutional offices continues to be vital and may become even more complex. For instance, many AMC’s have strict indemnification policies for industry-supported trials, and these policies may be dependent upon whether or not clinical studies present greater than minimal risk. Therefore there must be a communication mechanism in place with the IRB in order for the sponsored programs office to know what necessary provisions must be negotiated based upon risk determination. The AMC’s legal counsel also becomes a critical resource for the sponsored programs office when negotiating clinical trials.

While there are no universally “standard” positions with respect to negotiation of key policy and management areas among AMCs, there are basic recommended principles that are normally embraced by institutions. These principles are discussed in the AAMC publication entitled “Clinical Trial Contracts: A Discussion of Four Selected Provisions.”

The key policy and management areas that must be addressed by sponsored programs offices with respect to contract negotiation are the following:

- **Publication**: Does the institution ever accept a publication restriction for a clinical study? Does it ever accept a delay longer than 90 days? What is the length of delay that an institution will accept if it is participating in a multisite study and the institution wishes to publish its own results? Is this ever longer than a year?

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3 See [https://members.aamc.org/eweb/upload/Clinical%20Trial%20Contracts.pdf](https://members.aamc.org/eweb/upload/Clinical%20Trial%20Contracts.pdf)
Who within the institution makes these determinations?

◆ **Intellectual property:** Will the institution be willing to give up title to intellectual property in a sponsor-initiated clinical trial? Will it give up all intellectual property or only that intellectual property that results from the stated activities of the protocol? Does this policy differ if it is a PI-initiated trial? Who within the institution makes the decision on intellectual property issues in clinical trials? If the institution finances building construction with the issuance of tax-exempt bonds, then it may also be necessary for bond counsel to render an opinion on assigning title on intellectual property and whether there are any constraints imposed by Revenue Procedure (Rev. Proc.) 2007-47.

◆ **Indemnification:** Does the institution always insist upon full indemnification for damages sustained as a result of conducting the protocol? Under what situations will this requirement be reduced or waived by the institution? Will the institution require full indemnification for PI-initiated studies? What types of indemnification is required on PI-initiated studies? Does the institution have a formal policy whereby a risk assessment is done to determine the amount of risk the institution is willing to undertake?

◆ **Subject injury:** Does the institution always require the sponsor to pay for a subject’s injuries that are sustained as a direct result of participating in a trial? Are there any exceptions? What about PI-initiated studies? Who makes the exceptions? How does the institution assure that the language in the clinical trial agreement mirrors the language in the human subject’s informed consent form?

These questions illustrate the need for clear institutional policy and clear authority for deviations from standard policy. At some medical centers, authority for determinations and deviations on these issues may rest with different individuals. Or it may be that the institution will never accept deviations (which may ultimately result in failed attempts at negotiation). For some negotiation issues, questions concerning academic freedom may arise. For others issues the decision is based on the institution’s overall aversion to risk. And for still other issues, it is a question of what the IRB requires with respect to human subjects protections. There are many resources that can assist an institution and the OSP in molding its policies and management strategies around these issues (see the resources included in Figure 5).

**Example**

The University of Rochester does make an exception for indemnification and provision for subject injury when the protocol is PI initiated. However, there is a definitive process for doing this, and the IRB, the sponsored programs office, office of counsel, and the Senior Associate Dean for Clinical Research all have a role in the process. The policy was approved by the highest levels of the university, thus there is a clear expectation of what needs to take place. The institution also has a clear policy for the provision of full indemnification and payment for subject injury when the protocol is sponsor initiated. The need for both policies to be clearly articulated is critical in the proper negotiation and...
facilitation of clinical studies.

**F&A Reimbursement.** Another issue that may be assigned to an institutional decision maker is that of facilities and administrative (F&A) reimbursement. F&A rates for industry-sponsored clinical trials will normally be based on an institution’s Other Sponsored Programs (OSP) rate. One of the rationales for charging less than the institution’s federally approved research rate is that sponsor-initiated trials typically do not have a basic research component. Often, the protocol is administered at an off-site location. Some industry sponsors will have caps on what they will reimburse, and thus institutions will need to develop their own policies with respect to waivers on F&A rates, or whether this issue is negotiable. It is recommended that the AMC have a documented policy regarding indirect cost rates for clinical trials to help ensure consistency across all trials. It is important to keep in mind that a rate applied to industry sponsored clinical trial may be influenced by broader market forces as well.

**Mission of the Institution**

Clinical trial research raises two issues which highlight the importance of confirming that the work being undertaken is consistent with the AMC’s mission.

*Intellectual Property:* As noted earlier, it may be necessary to engage tax counsel in issues surrounding title to intellectual property arising from clinical studies.

*Unrelated Business Income:* Related to this issue, AMC’s need to be aware that clinical trials, because they are often focused on testing rather than basic research, could be construed as “regular activity that is not substantially related to its tax exempt purpose or function.” As such the activity could be subject to unrelated business tax (UBIT). AMC’s can avoid this classification by ensuring that any trials conducted are fundamentally related to education and research. Additionally AMC’s can avoid UBIT by documenting how the activity being undertaken relates to the AMC’s mission.

At one medical school, a simple questionnaire is appended to the institution’s routing form that asks several questions, as included in Figure 2. By virtue of analysis of the answers to these questions, the institution can be assured that the clinical trial activity falls within the stated mission of the institution.

AMC’s should also be concerned about industry sponsored clinical trial activities resulting in “private business use.” Within Rev. Proc. 2007-47 the section labeled “Guidelines for Research Agreements” is applicable when sponsored research is conducted in facilities constructed in whole or in part with tax-exempt bond proceeds, and it describes the conditions under which a research agreement does not result in private benefit use.\(^4\) (For a full discussion of these issues, see Chapters 2900 and 1900.) Documentation, though a checklist similar to that noted above, as well as retention of publication rights within the negotiated clinical trial agreement, will help minimize the risk from these concerns.

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\(^4\) See 26 USC 141, “Private Activity Bond; Qualified Bond.” The “Guidelines for Research Agreements” were issued Jan. 10, 1997.
Figure 2: Research Profile for Industry-Sponsored Clinical Trials

In order to evaluate and document the proposed industry-sponsored clinical trial’s relationship to the stated missions of the “Medical Center;” the “University” requires that all principal investigators complete this “Research Profile.” It is not necessary to answer yes to every question in order to demonstrate that the study contributes to our exempt purposes. It will be the responsibility of the chair or unit chief to review the profile; any questions concerning the nature of a study must be discussed with the dean.

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Has the PI or other university-designated individual had input or involvement in the study design and/or been designated manager of data-coordination activities?

________________________________________________________________________

Is the study a systematic investigation aimed at the discovery, interpretation, or verification of facts? If yes, please describe briefly or attach summary of the scientific intent of the study:

________________________________________________________________________

Is the project furthering an educational purpose? If yes, please indicate how residents, fellows, or students are involved in the study:

________________________________________________________________________

Is there therapeutic intent (i.e., potential of some benefit) to improve the research subjects’ condition?

________________________________________________________________________

Is the study concerned with new application of products or drugs in order to improve the ability to treat various diseases and conditions?

________________________________________________________________________

Does the project qualify as scientific research involving testing to validate a scientific hypothesis, rather than routine testing to determine if the item meets certain specifications?
Billing Issues

Sponsored programs administrators will need to be aware of the potentially problematic billing issues that may surface during the period of the clinical trials. As it is illegal to bill Medicare/Medicaid or other third-party payers for expenses billed to clinical trial sponsors (so called double billing), it is important that the sponsored programs office is aware of institutional policies with respect to the billing of medical treatments and procedures.

Hospital Compliance Offices. How OSPs interface with hospital compliance offices is very important, and both offices should work together to ensure compliance and effective communication in this area. Often, these offices will work together to establish not only billing practices, but appropriate budgeting and budget review for clinical trials that identifies those items and services that should be billed to the sponsor versus procedures that are routine and allowable costs to Medicare/Medicaid under the regulations. These offices, working cooperatively, can also be instrumental in pulling together training programs on the budgeting and billing aspects of clinical trials. Once such education program has been developed by the University of Chicago.5

Conflict of Commitment and Interest

Research conflicts of commitment and interest are another critical area related to clinical trials and important within research administration more broadly. Sponsored programs administrators should be extremely cognizant of the conflict of interest policies that have been established within their AMC. In particular how these policies treat the disclosure and management of financial interests if they relate to clinical studies. Even before the recent implementation of the Department of Health and Human Services Conflict of Interest policy (42 C.F.R. Part 50, Subpart F) most AMCs had established a “zero threshold” for investigators when disclosing financial interests that could affect, or appear to affect, the outcome of a clinical trial, or their research more broadly. Some AMC’s have adopted the guidelines developed by the AAMC on the management or elimination of conflicts associated with clinical trials, whereby a faculty member may not conduct a clinical trial if he or she has a significant financial interest associated with that clinical trial unless he or she can show a compelling reason to do so.

The “compelling reason” argument is interpreted slightly differently among AMCs, and, in order to provide guidance to medical center faculty, sponsored programs staff should have some understanding of the threshold and/or types of financial interest the institution deems to be significant whereby the individual either has to divest herself or himself from the financial interest or forego participation in the trial.

Others require management or divestiture only when the significant financial interest is deemed to be related to the clinical trial, and more importantly that the significant financial interest could directly and significantly affect the research.

Typically the director of the sponsored programs office will sit on the institution’s conflict of interest committee in order to provide guidance to both the com-

mittee and the sponsored programs staff in this area. It is critical that the conflict of interest committee be apprised not only of the investigator’s financial interests, but also of his or her funding portfolio. Thus sponsored programs office representation on the conflict of interest committee is extremely valuable.

**Registering Clinical Trials**

Federal law requires public registration of most clinical trials (See US PL 110-85). In fact most informed consent forms now state the following, “A description of this clinical trial will be available on http://www.clinicaltrials.gov, as required by US Law.” Additionally, the International Committee of Medical Journal Editors (ICMJE) now requires, as a consideration for manuscript publication, that the clinical trial be registered in a public registry. Registration will typically be the responsibility of the pharmaceutical company as study sponsor; however, it may be an individual investigator’s responsibility when conducting PI-initiated trials. (For a discussion of the clinical trial registration requirements under Federal Law, see ¶2120.1.)

**Institutional Administrator:** There is a requirement for an institutional representative to serves as the official contact with ClinicalTrials.gov. This person will assign user IDs for staff members who are eligible to release clinical trials data or register in ClinicalTrials.gov, the recommended public registry. This institutional role may be delegated to the sponsored programs office, or the responsibility may be placed elsewhere within the organization. The institution should ensure that the instructions for registering are readily available for researchers and administrators. (see: http://www.urmc.rochester.edu/ctsi/regulatory-support/clinical-trials-registration.cfm)

**Process Facilitation**

With all the complexities of clinical studies, it may seem almost impossible to facilitate this type of transaction. Nonetheless the sponsored research office must recognize the importance of these studies and be responsive to the time sensitivity of ensuring that they are negotiated in the most expedient manner. Informing PIs of potential issues early in the process, enlisting their help on occasion to explain university issues to industry colleagues, and understanding the implications of competitive enrollment are all important factors when facilitating clinical trials. Research administrators can also provide insight into the financial risks associated with conducting clinical trials and assist their departmental counterparts in mitigating these risks to the extent possible. Offering complete explanations of university policies, even in an annotated clinical trial agreement, will be helpful in expediting negotiations.

Many AMC’s continuously strive to improve efficiency by streamlining the routing form for industry-supported clinical trials, among other tactics. Along with facilitation, faculty must be educated on the consequences of initiating a trial without a signed contract in place or IRB approval, as well as the institutional and individual ramifications for acts of negligence. When the research administrator has the tools and knowledge they need to negotiate complex agreements with savvy industry sponsors – successful studies are the result.
HIPAA Compliance

With the passage of the Health Insurance Portability and Accountability Act (HIPAA) of 1996, which contains the national standards to protect the privacy of personally identifiable health care information (or PHI, protected health information), the conduct of clinical research by “covered entities” has been further complicated. A “covered entity” is “a health care provider who transmits any protected health information in electronic form.” For resources relating to HIPAA compliance, see Figure 5. (Additional HIPAA compliance materials are located in ¶2130.)

In order for the covered entity to conduct research using patient information, one of the following conditions must be met:

1. Permission is granted by the patient, through a written authorization form.
2. The information is completely de-identified and no longer governed by HIPAA.
3. The information is compiled in a “limited data set” and a data use agreement is executed. (See, http://www.hopkinsmedicine.org/institutional_review_board/hipaa_research/limited_data_set.html).
4. The activity qualifies as “preparatory for research.”
5. A waiver of individual authorization is obtained from an IRB or privacy board.
6. The researcher is accessing information solely on decedents.

Most IRBs have undertaken the role of the privacy board and append the individual authorization to release PHI to the subject consent form. Thus HIPAA has affected how IRBs operate and has required additional expertise from existing committees.

However, the sponsored programs office may also become involved with HIPAA requirements when negotiating clinical trial agreements covering projects that transmit PHI, in working with data use agreements (e.g., an agreement that establishes the ways that a limited data set may be used and how it is protected) that convey PHI, and in fielding questions from investigators and sponsors. Therefore it is important that the sponsored programs office have at least a basic understanding of the rules (sponsored programs personnel at covered entities are likely to be required to take at least part of the mandatory HIPAA training). The office must also understand

1. the roles of the privacy board or IRB;
2. the role of the institution’s privacy officer, and
3. the role of the OSP when negotiating agreements.

Note that the covered entity may have relationships with “business associates” or persons/entities that provide certain functions, activities, or services whereby disclosure of PHI may be necessary (such as a billing service). It is typically not the sponsored programs office that negotiates these agreements; legal counsel and/or the privacy officer normally have responsibility for such agreements.
Most research administration offices in covered entities will, as a matter of practice, include a standard HIPAA provision in their clinical trial agreements. An example of such a provision is included below.

**Example**

COMPLIANCE WITH HIPAA. “It is understood and agreed that Institution, as a covered entity under the Health Insurance Portability and Accountability Act of 1996 (“HIPAA”), may not use or disclose protected health information (“PHI”), as defined in HIPAA and its implementing regulations, for purposes other than treatment, payment, or health care operations without first obtaining authorization from the individual concerned. Institution agrees to obtain authorization from individuals enrolled in the Study which permits disclosure to and use of PHI by Sponsor for purposes of conducting and overseeing the trial. Sponsor agrees that it shall not disclose PHI to any person or entity except as permitted by the HIPAA authorization.”

**Data Use Agreements**

The transmission of limited data sets and data use agreements involve additional complex requirements for the institution. Transmission of data resulting from human subject research is particularly sensitive and should be reviewed thoroughly. Limited data sets (see above) may be used only for the purposes of research, public health, or health care operations. It may be the OSP’s responsibility to review and negotiate data use agreements if they pertain to activities for a funded, or even unfunded, research project. These agreements are normally negotiated against a standard template that has been developed by the institution.

Typically the IRB, in partnership with the OSP will inform an investigator of the procedures for a data use agreement, and it may even be necessary for the IRB to retain a copy of the data use agreement in the study file. Data use agreements outside the research arena are usually the responsibility of the HIPPA security officer. While this is a standard scenario for such agreements, institutional practices vary, and the OSP should be familiar with the process and procedures of its own medical center.

**Human Embryonic Stem Cell Research**

This type of research is primarily done within academic medical centers and research institutes; however, some institutions do not conduct research with nonregistered hESC due to state regulations. In 2009 the landscape of Human Embryonic Stem Cell (hESC) Research changed dramatically when Executive Order 13505, “Removing Barriers to Responsible Scientific Research Involving Human Stem Cells” was issued. Following this order, the National Institutes of Health released guidelines for use of hESC in research. These policy changes have reinvigorated research utilizing hESC’s and AMC’s should expect their faculty to become involved. How do sponsored programs offices interface with these regulations and what are the practices that these offices need to initiate to assist with compliance?
Research Identification

The sponsored programs office is an important component in assisting to identify hESC research within the institution. Not all hESC research will be externally funded, but a simple question on the institution’s routing form (e.g., will the research use hESC?) and notification to the appropriate individual (notably a dean or the chair of the Embryonic Stem Cell Research Oversight (ESCRO) Committee) is extremely important. Once a project using hESC is identified, the OSP or other office should find out specific information about the project including the following:

◆ Is the project using nonregistered lines? (http://grants.nih.gov/stem_cells/registry/current.htm)

◆ Where will the project be physically located?

◆ What equipment will be used?

◆ What personnel will be working with nonregistered hESC?

Approval of the project by the AMC’s ESCRO committee will likely be required by the sponsor. See here for an example of the information required to apply for this approval. http://www.urmc.rochester.edu/stem-cell/escro.cfm.

12105.8 Subaward/Subcontract Administration

Although the issues surrounding subawards to collaborating institutions are covered in a separate chapter of the Guide, there are specific issues that the AMC OSP needs to take into account when organizing for success in this area. The AMC sponsored programs office will see many industry and federally sponsored contracts in addition to traditional assistance grants – and these contracts will require additional management when establishing the sub-agreement (See Chapter 3700 for a full discussion of subawards.)

Multisite Industry Studies

AMC sponsored programs offices often have to assist in the development, issuance, and negotiation of multisite clinical trials funded by industry. The standard Federal Demonstration Project (FDP) Model Subaward Agreement template was not intended for situations as complex as this. The FDP Model Agreement does not accommodate the necessary flow downs imposed by industry, the fixed-price/per-subject method of payment based on case report forms, or the fact that typically an investigator’s written assurance on the clinical trial agreement is required prior to study initiation. Thus OSPs will need to consider how best to develop practices and expertise in this area and how to ensure that resources are adequate to accommodate the large number of subcontracts that may need to be issued for one study (e.g., if the medical center houses one or more clinical coordinating centers, it is not unusual to have more than 50 sites for one funded study).

Policy Development

In addition to the staffing needs that may be required to handle the workload involved in multi-site clinical trial management, OSPs should consider additional
Figure 3: University Medical Center Human Stem Cell Research Tracking Form

If your proposal/project involves the use of human stem cells or embryos, please complete this form and forward it to the Dean's Office, Box 706.

Date ____________________  
PI Name: ____________________  
Dept: ____________________  
Phone _______________ Email Address ____________________  
Sponsor: ____________________  
Project Title: ____________________

Type of Research

☐ Research using human embryonic stem cells  
   from the existing NIH Human Embryonic Stem Cell Registry*  Yes ___ No ___  
   * For policy and additional information, see: http://stemcells.nih.gov/  
☐ Research using fetal stem cells  
☐ Research using embryos

For research using either fetal stem cells (not approved NIH cell lines) or embryos, please complete the following:

Project Location

☐ On Campus  
   Building ____________________ Room ____________________  
   Building ____________________ Room ____________________  
☐ Off Campus  
   Address ____________________

Existing Equipment

UR Tag # ____________________  
Description ____________________  
Location ____________________  
Manufacturer Name ____________________  
Serial # ____________________  

UR Tag # ____________________  
Description ____________________  
Location ____________________  
Manufacturer Name ____________________  
Serial # ____________________  
☐ Additional equipment information provided in an attached list
policies in this area such as the following:

◆ Subagreements should typically be issued for the full length of the anticipated project period in order for sites to continue enrollment and treatment.

◆ OSPs should consider the collaborating site’s institutional policies in areas of publication, intellectual property, indemnification, and subject injury. It is imperative to get studies up and running quickly, and sponsors should be aware of the consequences of the inclusion in study agreements of terms that other institutions may have difficulty accepting.

◆ Subagreements may be issued without a ceiling amount, due to the fact that it is sometimes impossible to predict how many subjects will be enrolled; however, it may be preferable to indicate a “not-to-exceed” amount. It is advisable to include a provision that alerts the subcontractor that authorization to release funds is contingent upon payment from the industry sponsor for subrecipient costs. The prime recipient should avoid becoming liable for payment exceeding reimbursement and/or budget approval by the industry sponsor. It will be important for the AMC to review the regulations associated with the Federal Funding Accountability and Transparency Act (FFATA). The AMC is required to report, within a Federal database, on funds allocated to sites under a clinical trial subaward. This becomes complex when the award is issued without a ceiling amount. (See Chapter 3700 for more details.)

◆ If the AMC hosts a clinical trials coordinating center, it is essential for there to be open and effective communication between the center and the OSP. These offices need to work as a team, and the OSP should collaborate with the center to develop agreement terms that fit the coordinating centers’ business practices. The OSP should encourage the coordination center to ensure that collaborating sites agree up front on the proposed per-subject fee and appropriate F&A cost. This will facilitate smooth subcontract negotiations. When issuing subcontracts, it is often advisable to specify a due date for return of the contracts given the time sensitivity of this work. And, while payment is normally made on the receipt of case report forms, the coordinating center may choose to implement more sophisticated processes, such as the generation of invoices by the coordinating centers that are based on electronic case report data and verified by the site. Subcontracts should reflect these practices.

◆ The institutional policies with respect to waiver of indirect costs on multicenter studies should be clearly articulated. NIH reaffirmed several years ago the applicability of academic institutions’ negotiated F&A rates on subawards, i.e., on federally supported studies each site should be reimbursed at its full rate. There has been a recent trend from Federal Sponsors issuing total cost funding caps on clinical trials awards. These caps could put downward pressure on the assessment of Indirect costs across a multi-site trial. Additionally, foundation-led cooperative clinical trials continue to cap the reimbursement of the full rate in order to fund additional sites. The OSP should be aware of the limitations of F&A assessment in multisite studies with Federal award caps or funded by
foundations and by industry, and it will need to develop a position on the issue of waivers in conjunction with its dean’s office and budget officials. (See a full discussion of F&A waivers in Chapter 1700.)

◆ AMC’s should be concerned about IRB approval across the sites of a multi-site clinical trial. The coordinating center, OSP and IRB should discuss these issues during the proposal development stage to ensure there is harmonization around subcontracts, protocol, and informed consent documentation among the many sites. There is growing pressure for AMC’s to engage a central/Independent IRB when planning and executing multi-site clinical trials. This is an area of increased interest – several institutions have initiated pilot programs and/or established policies regarding the use of a central/independent IRB. (See here: http://research.unc.edu/offices/human-research-ethics/)

International Collaborations
Subcontracting with foreign and developing countries is not unique to medical centers. However, given that a significant portion of foreign collaborations are funded by HHS or the Agency for International Development (AID) for the purposes of biomedical research, health care delivery, or health care education and intervention, medical center OSPs should be aware of the unique issues that arise when subcontracting to foreign institutions.

The FDP has developed a template to be used by universities when subcontracting to a foreign site from NIH grant funding. This should prove useful for OSPs at medical centers, as it provides a road map for developing institutional positions associated with issues such as additional risk, method of payment, currency, public policy requirements, financial conflict of interest, additional costs that may be required in the work (e.g., translators, shipping costs), any additional taxes imposed by the foreign country, varying accounting practices, subaward monitoring, and audits. (For a full discussion of international collaborations, see Chapter 3500.)

This discussion does not provide a comprehensive overview of all the possible considerations involving foreign collaborators; at a minimum OSPs should consider working with legal counsel on these issues, as well as with risk management. Before entering into subawards with foreign organizations, a medical center OSP should consider the following:

1. Conduct a pre-award audit by an external audit firm if the subaward is significant and to a developing country; this cost may be covered by the award. However, even if it is not a covered cost, it is a prudent approach that may mitigate risk and potential disallowances.

2. Use a fixed-price award, rather than a cost reimbursement mechanism. While the up-front analysis may be more intensive, this mechanism has the advantages that the subawardee has greater incentives for compliance, there is less flow-down risk, and cost reimbursable payment may not be practical given the accounting principles of the foreign country.

The additional time that is required to complete and negotiate foreign sub-
awards is considerable and should be taken into account when planning such actions. In addition OSPs should recognize that NIH must obtain State Department approval for any non-U.S. site that is proposed as a participant in an NIH-funded study. This approval may take up to two months. This delay must be communicated to the medical center’s PI in order to provide accurate information on when work can actually begin.

\section*{2105.9 Effort Reporting}

Effort reporting within a medical center environment is complicated by clinical practice compensation and the treatment of clinical appointments either inside or outside the institution. It is imperative for the sponsored programs office to be very familiar with how clinical compensation is treated by the medical center.

\textbf{Compensation Issues}

Questions concerning the medical center’s institutional base salary (IBS) often arise, such as the following: Are clinical salaries part of the center’s IBS, and are clinical duties considered part of the person’s institutional responsibilities? Is clinical compensation shown on the institution’s payroll and is it paid at the direction of the medical center? Or is clinical compensation under the control of another “paymaster” or separately organized clinical practice plan, and are clinical duties not considered part of the faculty member’s institutional requirements?

NIH has issued guidelines on this subject in its Grants Policy Statement section 7.9.1 (https://grants.nih.gov/grants/policy/nihgps/HTML5/section_7/7.9_allowability_of_costs_activities.htm). Because of the complexities of clinical salaries, there may need to be additional resources — such as training on how to represent salaries in grant applications and how to ensure accurate effort reporting — within the OSP to ensure compliance in this area.

The guidance by NIH elucidates one more important point for OSPs in medical centers: “[T]hat the IBS not vary based on the specific clinical services provided by the investigator within the periods for which total IBS is certified by the grantee institution.” Most clinical salaries controlled by medical centers can vary depending upon the time spent performing clinical duties, number of patients seen, etc. It is not uncommon for medical centers to have two or three levels of clinical compensation. These levels will vary among institutions, but could be represented by a “guaranteed” or minimal amount of compensation, plus an “approved” level or the expected compensation based on performance metrics, or perhaps a “targeted” level whereby a clinician can accrue a higher salary based upon enhanced clinical performance.

The NIH guidance suggests that the approved level be utilized in grant applications and in effort reporting; however, it is not always entirely understood by faculty which salary level should be utilized for which purposes. With respect to this aspect of representing the IBS, OSPs should be in close communication with the dean’s office and with the office that authored the institution’s “clinical compensation plan.” Best practices would dictate that the clinical compensation plan include a section on representation of salary to potential sponsors and for purposes of compli-
ance with payroll certification or effort reporting.

Finally OSPs should recognize that the percentage of effort that clinical investigators can devote to research is under constant pressure due to the aggregated demands of patient care, educational programs, and administrative duties. In addition there are various measures of clinical faculty “time.” This includes the cost reporting or “time and effort” study that is done by hospitals to indicate hours spent on various activities, including research, to ensure proper billing to Medicare/Medicaid. This report generally represents an estimate, as it measures effort (by hours) during selected weeks during the year; these weeks may not be representative of how the person normally spends his or her time. In addition faculty may have problems completing the study as requested categories of effort can be confusing and sometimes overlap.

Others measure of effort include the level of clinical activity as represented by RVU’s or clinical billings or revenue. Also productivity statistics based on comparison benchmarks established by a group of AMCs on “imputed clinical FTE” (full-time equivalent) might be utilized.

How all these measures compare to payroll certification or effort reporting is very important. For those institutions that include clinical compensation in the IBS, OSPs should be in close communication with the AMC’s compliance office (if applicable) and with the office that requests that faculty complete the time and effort studies. This is especially important when the clinical faculty member has received an award that mandates a significant commitment to research, such as the NIH K award series. These awards are even further complicated as they can establish salary caps that do not match the faculty’s current IBS, thus requiring cost sharing by the AMC. The following practices in this area are recommended:

♦ Issue effort reports or plan confirmation reports around the same time that the hospital time and effort studies are conducted, and insert a reminder on each type of report that faculty should consider the information portrayed on both reports to ensure consistency.

♦ Issue an introductory letter from the OSP, or in conjunction with the dean’s office, to all new K award recipients (or other faculty that have received awards that require minimum effort levels committed to research) that reminds faculty members, mentors, and chairs of the obligations that the institution has undertaken to protect dedicated effort to research pursuits.

♦ Issue an additional certification on a periodic basis to K award recipients that requires attestation that the faculty member has committed the required percentage of effort to research and that any salary supplementation (e.g., cost sharing) did not impose any constraints on how this effort was spent.

♦ In concert with the compliance office, issue a notification to the chair and mentor of any measures of time or effort that indicate that there may be a deviation from the commitment to research. No measure of effort is perfect, and typically these deviations can be easily explained. But, given the complexities of clinical appointments, it is extremely helpful to provide a baseline measurement and the

opportunity to correct any apparent discrepancies in a timely manner.

Clinical Trial Effort

One final topic that may warrant additional education and guidance in the area of time and effort for clinical trials administration is the faculty effort provided in the conduct of the trial. This may be a difficult issue, as a number of factors will influence the amount of effort that an investigator will devote to a trial. These factors can include the
◆ phase of the trial,
◆ amount of interaction that the faculty member will have with subjects,
◆ roles of other study personnel such as nurse/study coordinators, and
◆ amount of overlap between the study and clinical intervention, routine services, or standard of care practices.

These issues become very complex when a physician is using his or her own patients as subject volunteers, as the lines between clinical care and research may become blurred. It is important for an OSP to work with the dean’s office, administrators engaged in clinical trials, and the compliance office to set forth some guidance and instruction on the matter.

This instruction should highlight that investigators are required to list their active industry-funded clinical trials on current and pending support information. Referencing NIH policy could be helpful; however, it is not entirely clear at what level NIH expects that clinical trial effort will be reported. NIH has suggested that it is appropriate to list an aggregate level of effort on an individual’s industry-supported clinical trials, provided that the aggregated effort is no greater than 10 percent. However, OSPs at medical centers should consider their internal policies and gauge what is appropriate for the institution. This is an area that continues to evolve and OSPs at medical centers should continue to keep alert for any new guidance.

12105.10 Other NIH-Specific Issues

As noted above, the predominance of NIH funding at AMCs will influence the OSP’s practices, policies, and organization. While many of the NIH-specific issues have already been discussed, the OSP should consider the following additional items in order to optimize the administration of NIH proposals and awards:
◆ Establish continuing and regularly scheduled hands-on training for faculty and administrators for the development of NIH applications, budgets (including modular), and navigation of the NIH’s electronic grants management systems (Grants.gov, eRA Commons, Public Access).
◆ Provide specific support for NIH training grant applications, such as workshops on proposal development and grants administration. An OSP should consider working with the graduate student and postdoctoral dean’s offices to provide standardized and updated information for the tables required in the training grant applications.
◆ Interface with the medical school’s library to offer clear instruction on how to register final peer-reviewed publications in the National Library of Medicine’s PubMed in accordance with NIH’s “Public Access Policy.” (See Figure 5 for the Web site for NIH’s “Public Access Policy” and other helpful resources.)

◆ Assist the dean’s office in writing the regulatory research compliance and support sections now required by many of the larger applications solicited by NIH.

◆ Post the various policy requirements required by NIH in proposal submission and award administration, along with medical center implementations of policy. This may include providing examples of proposal language for the NIH data-sharing and unique resources-sharing requirements and clear instruction and policies with respect to the institutional treatment of any salary costs over the NIH salary cap.8

◆ Currently a significantly reduced pay line may account for increased proposal activity within the AMC. OSPs should ensure adequate staffing for NIH deadlines and establish clear-cut policies with respect to internal deadlines in order to meet heavy NIH deadlines.

2105.11 Interface with Technology Transfer and Corporate Alliances Offices

An AMC sponsored programs office, often in cooperation with the institution’s corresponding office of technology transfer (OTT), will need to be prepared for (1) the numerous MTAs that will need to be negotiated and adequate staffing for this function; and

(2) the possibly conflicting terms within the material transfer agreements and the use of the materials in projects that have project-specific intellectual property obligations.

Other issues that are likely to involve the OSP and the OTT concern:

◆ the NIH requirements regarding the sharing of research data, unique biological resources, and model organisms;

◆ the requirements under the Bayh-Dole Act (regulating ownership of federally funded inventions) and use of a “Determination of Exceptional Circumstances,” that can sometimes occur with NIH funding when the agency is partnering with corporate manufacturers and developers of therapeutic compounds (A federal agency may decide that title to inventions is better vested with the federal agency than the grantee. Such a decision — termed a “Determination of Exceptional Circumstances” (DEC) — must be made prior to the award of federal support and becomes a part of the sponsored project agreement.); and

◆ problematic intellectual property terms that can be found in private foundation

7 See one example of such instruction at http://www.urmc.rochester.edu/libraries/miner/publishing/NIHPublicAccessPolicyMinerLibrary.cfm
agreements and in grants from voluntary health associations.

These issues are fully discussed in separate chapters of the Guide (see Chapters 1900 and 2900).

**Corporate Alliances Offices**

With the uncertain future of NIH funding, it is not uncommon for medical centers to establish offices of “corporate alliances” or “corporate relations” in order to attract and facilitate the interaction between university researchers and corporate scientists and attract more corporate research funding. These offices could be outgrowths of the office of technology transfer or development office. Sponsored programs offices, again, will want to establish close communication with this office, and ensure that each office understands its role in the negotiation and finalization of corporate agreements. In fact it is advisable that representatives from the offices of technology transfer and sponsored programs sit on the administrative advisory committees of the office of corporate relations.

**¶2105.12 Collaborative/Cross-Disciplinary Projects**

Because medical centers are often decentralized and physically removed from the rest of the university campus, OSPs may need to consider (along with deans’ offices) practices that will assist with the facilitation of cross-campus and collaborative research. Certainly there are academic departments and centers that play a huge role in cross-disciplinary research, such as biomedical engineering. OSPs will need to work with a dean’s office on issues such as

◆ attribution of F&A “credit,”
◆ utilization of space, and
◆ recognition of investigator contributions in cross-campus activities.

The resolution of these issues needs to be made readily available to department chairs and faculty in order to establish clear expectations for collaborative projects. It is in the best interest of the OSP to make this process as transparent as possible, as institutions and federal agencies encourage, and in some cases prioritize, collaborative ventures.

The OSP may want to devise a form for the identification of F&A “credit” among several schools. An example of such a form is included as Figure 4.

**¶2105.13 Affiliated Hospital Issues**

A final issue that an OSP in a medical center needs to have familiarity with is its relationship with the patient care organizations that are within the same organizational structure, within the same medical network, or that are loosely affiliated organizations. Even when an AMC owns its hospital, the academic arm and the patient care arm may operate quite independently. Thus an OSP needs sufficient processes, controls, and communications in place to

◆ ensure that any “sponsored research” or “organized research” that is awarded to
the hospital is accounted for and managed appropriately (There may be programs that hospitals are awarded that support purely patient care programs. But if these awards are subject to audit, and the hospital is covered by the institution’s single audit, they must be appropriately administered through the OSP);

◆ receive timely information on the research patient care rate that the hospital negotiates, to ensure that the organization is treating in- and outpatient costs consistently in proposals (especially when budgeting clinical trials), awards, and expenditures; and

◆ work cooperatively on research issues that span both the hospital and the academic school, such as effort reporting and clinical trials administration (as noted above).

Various ‘Arrangements’
The same principles hold true when the medical center or university has incorporated its physician practice groups. In this context, OSPs should be sensitive to clinical trial negotiations and understand that physician practice groups located outside the medical center will need education and assistance in understanding university practices and policies.

There may be hospitals that are within the same health network as the medical center, and faculty within these hospitals may have university appointments that would be subject to university policies and procedures, but the entity would not be subject to the same single audit. An OSP should work with the administration of these entities and with legal counsel to determine how university faculty will be apprised of the AMC rules and regulations (as they are physically removed from the rest of the institution), and how the OSP office can assist in the management of sponsored awards. Practices will vary from institution to institution, but it may be necessary to do an “inventory” to ascertain what research would be subject to the medical center policies. In these cases, as with any other regulatory committee, input from legal counsel is critical to determine the level of compliance oversight that should be put in place within these entities.

There are affiliated entities where there is no common management, but that still interact with the medical center. An OSP should be familiar with the content of existing affiliated agreements and the duties and obligations spelled out in those agreements with respect to research collaborations (if any). When full-time medical center faculty is housed within these entities, it is critical that the expectations of all parties are known when sponsored research is involved.

Working with VA Hospitals
Perhaps one of the most complicated relationships a medical center can have is its association with Department of Veterans Affairs (VA)-owned hospitals and facilities. Because these are government entities, faculty can accept “Intergovernmental Personnel Act” appointments and spend a period of time at these hospitals; the VA will reimburse the medical center for the faculty member’s effort at the VA facility (either full time or part time). More likely, faculty will split their appointments
### Figure 4: Sharing of Indirect Cost Recovery Form

**Purpose:** Please note that this form is to be used when sharing of indirect cost (F&A) recovery is proposed for collaborative interschool/college extramurally funded programs. The completed form must accompany the completed University Proposal Routing Form.

<table>
<thead>
<tr>
<th>Principal Investigator:</th>
<th>Department:</th>
<th>Proposal Title:</th>
<th>Total Project Budget:</th>
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<th></th>
<th>Direct Costs:</th>
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<th>Total:</th>
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<td>2. Subproject 2</td>
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<td>Investigator:</td>
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**Allocation of Indirect Cost Recovery:** Please list summary information for all subproject budgets allocated to a collaborating school/college. Attach additional sheets as necessary. Unless otherwise noted, subproject departments will be held accountable for any deficits incurred during the life of the project. These deficits will be transferred to a departmental account.

Approved: (This form must be signed by the principal investigator and all involved chairs and deans)

<table>
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<th>Principal Investigator:</th>
<th>Chair(s):</th>
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between the VA hospital and the medical center, or consult with the VA through a “without compensation appointment” (WOC).

Going back to the days of World War II, there is a long tradition of cooperation and collaboration between VA medical centers and medical schools. An OSP should be aware, however, that the affiliation with the VA might be extremely complex, particularly when government-funded research (by agencies other than the VA) is involved.

The VA and the medical center may choose to enter into an inter-institutional agreement called a Cooperative Technology Administration Agreement (CTAA). These agreements are not necessary, but may be advisable if there will be an ongoing association with the VA, as CTAs operate like a master agreement for planned collaborations. Alternatively, the medical center can enter into a VA-WOC “Appointee Intellectual Property Agreement” on a one-time basis to cover a faculty member’s work at the VA. With respect to overall administration of jointly conducted sponsored programs, institutions may choose to enter into subawards or other memoranda of understanding (MOU) to establish the responsibilities of conduct and administration.

Some medical centers may find both agreements problematic in terms of the intellectual property terms, and legal counsel or the office of technology transfer should assist the OSP in these matters. These agreements will oftentimes address clinical study IRB review and may add additional complexity to the review process when faculty members with joint appointments are involved. The Council on Governmental Relations Web site is a good resource for accessing information on the relationships — and the issues — between VA hospitals and universities.

This section provides a simplistic summary of the complexities that the medical center OSP administrator can encounter. Organizational structures, health networks, and affiliated entity structures are complex and vary from institution to institution and region to region. Research administrators should seek explanation of these relationships and their responsibilities to the university faculty in each situation. (For resources in this area, see Figure 5.)

¶2105.14 Conclusion

The risks of inadequate administration of sponsored programs in an academic medical center are great. These risks primarily result from the use of human subjects in research, as well as the use of potentially harmful toxins and materials. The liability associated with human subjects research, primarily research that is greater than minimal risk, is the predominant issue that sponsored programs offices will need to consider.

Other areas of risk — such as noncompliance with regulations surrounding conflicts of interest, HIPAA, effort reporting and representation of institutional base salaries, inappropriate billing to Medicare/Medicaid and other third-party payers, or lack of proper controls when subcontracting to foreign entities — also should be examined closely to ensure that sponsored programs offices have adequate policies, practices, and procedures in place as appropriate.

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9 See www.cogr.edu.
Various scenarios and tools have been suggested to medical center sponsored programs offices to assist in the proper oversight and stewardship of research and research funds. Periodic systematic review and analysis of existing policies and procedures in each high-risk area are a suggested exercise to ensure that the office stays responsive to an ever changing landscape of regulation and risk.

Providing appropriate resources is critical to success. Not only does the sponsored programs staff have to maintain a high degree of familiarity with the rules and regulations surrounding biomedical research, this knowledge is also essential for counsel that assist the OSP.

Sponsored programs offices at medical centers must, on some level, institute institutional training on the key aspects of biomedical research and specifically, research sponsored by NIH. Without a level of expertise at the local level, such as among faculty, departmental administrators, or study coordinators, the institution’s level of risk will remain unnecessarily high. NCURA offers many training opportunities to sponsored programs administrators at all levels working at medical centers, as do programs offered by AAMC, NIH, and other professional organizations. Knowledge is the key to success.

Suggested resources for additional assistance are included as Figure 5.
Figure 5: Resources

Human Subjects Research

The Belmont Report
http://ohsr.od.nih.gov/guidelines/belmont.html

21 CFR 50 (FDA Protection of Human Subjects Regulations)
www.access.gpo.gov/nara/cfr/waisidx_01/21cfr50_01.html

21 CFR 560 (FDA IRB Regulations)
www.access.gpo.gov/nara/cfr/waisidx_01/21cfr56_01.html

45 CFR 46 (“Basic HHS Policy for Protection of Human Research Subjects”)
www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm

FDA Institutional Review Board FAQs

OHRP Institutional Review Board FAQs
www.hhs.gov/ohrp/IRBfaq.html

Clinical Trials

Clinical Trial Registry:
clinicaltrials.gov

What NIH Grantees Need to Know About ClinicalTrials.gov and FDAAA
http://grants2.nih.gov/ClinicalTrials_fdaaa/index.htm

Principles for Protecting Integrity in the Conduct and Reporting of Clinical Trials
www.aamc.org/research/clinicaltrialsreporting/clinicaltrialsreporting.pdf

Protecting Subjects, Preserving Trust, Promoting Progress II: Principles and Recommendations for Oversight of an Institution’s Financial Interests in Human Subjects Research

Protecting Subjects, Preserving Trust, Promoting Progress: Policy and Guidelines for the Oversight of Individual Financial Interests in Human Subjects Research
www.aamc.org/research/coi/firstreport.pdf

September 2000 “National Coverage Decision Fact Sheet” (delineates Medicare billing for routine services provided during clinical trials)

Clinical Trials Registration (ICMJE Statement)
www.icmje.org/clin_trial.pdf

HIPAA

HIPAA Regulations:
http://www.hhs.gov/ocr/privacy/hipaa/administrative/index.html

HIPAA – Office for Civil Rights:
www.hhs.gov/ocr/hipaa
**Stem Cell Research**

NIH:
http://stemcells.nih.gov/info/Pages/Default.aspx

National Academies of Science “Guidelines for Human Embryonic Stem Cell Research”
http://genomics.unc.edu/articles/stem_cell_guidelines.htm

**Subawards**

NIH Public Policy Requirements and Objectives

FDP Web site (foreign subaward template) www.thefdp.org

**Other NIH Requirements**

NIH Office of Extramural Research https://grants.nih.gov/grants/oer.htm


NIH Data Sharing Policy Homepage

NIH Model Organism Sharing Policy Homepage

Financial Conflict of Interest and NIH:
http://grants2.nih.gov/grants/policy/coi/

**Effort Reporting and Payroll Certification**

“Guidelines for Inclusion of Clinical Practice Compensation in Institutional Base Salary Charged”

“Reminder to Applicants About Requirement to Submit Complete and Up-To-Date Other Support”

**Affiliate Hospital Issues**

Department of Veterans Affairs Guidance on Intellectual Property
www1.va.gov/vhapublications/ViewPublication.asp?pub_ID=403

Department of Veterans Affairs and University Cooperative Technology Administration Agreement
www1.va.gov/resdev/programs/tech_transfer/model_agreements/ctaa.doc
Supplementary Material

This section includes expanded coverage of special issues for academic medical centers. These materials are culled from a variety of authoritative sources.

Implementing the New Clinical Trial Registration Requirements

AIS editors

Public registration of some clinical trials has been required by federal law since 1997, but the Food and Drug Administration Amendments Act of 2007 (P.L. 110-85), signed into law by President Bush on Sept. 27, 2007, contains an expansion of the elements and the types of trials to be reported and requires submission of results data. And for the first time, there is an enforcement mechanism for compliance, so it is particularly important to be vigilant about compliance. According to www.clinicaltrials.gov, penalties for failure to register applicable clinical trials are significant and may include civil monetary penalties and, for federally funded trials, the withholding or recovery of grant funds.

The new law requires registration of trials on www.clinicaltrials.gov, which was created in 2000 and is operated by the National Institutes of Health (NIH). In discussing the new requirements, NIH said that “more data elements are required than under prior U.S. law, and these new requirements include primary and secondary outcome measures, start date, and target number of subjects.” Four additional data elements that have not been part of the registration are now required, and 12 data elements that were considered “optional” are now “mandatory” (for a rundown of these elements, see http://prsinfo.clinicaltrials.gov/interventional_summary_rqmts.pdf).

Many of the new required data elements mimic those required by some magazine editors before a paper is accepted for possible publication. The Association of American Medical Colleges has expressed support for reporting, in the interest of greater disclosure.

Types of Trials Requiring Registration. The new law states that registration is required for “applicable clinical trials,” which are defined as follows:

- Trials of Drugs and Biologics: Controlled clinical investigations, other than Phase 1 investigations, of a product subject to FDA regulation.
- Trials of Devices: Controlled trials with health outcomes of devices subject to Food and Drug Administration regulation, other than small feasibility studies, and pediatric post-market surveillance.

Responsibility for registration rests with the trial sponsor or the principal investigator “if so designated by a sponsor, grantee, contractor, or awardee, so long as the PI is responsible for conducting the trial and has sufficient data rights.

Key Dates. In general, the party responsible for registration for an applicable clinical trial must submit required information by the later of Dec. 26, 2007, or 21 days after the first patient is enrolled. There are two general exceptions:
(1) Data for trials “ongoing” as of Sept. 27, 2007, that do not involve a “serious or life-threatening disease or condition” must be submitted by Sept. 27, 2008.

(3) Trials that were ongoing as of Sept. 27, 2007, but were completed as of Dec. 26, 2007, and do involve a “serious or life threatening disease or condition,” are not subject to these requirements. However, “they may be subject to pre-existing registering requirements.”

Also, as of Dec. 26, 2007, any application or report submitted to the FDA “under sections 505, 510(k), 515, or 520(m) of the Federal Food, Drug, and Cosmetic Act or under section 351 of the Public Health Service Act will need to include certification of compliance with applicable provisions” of the law relating to mandatory registration.

2120.2 Tips for Creating Portable Device and Media Controls to Protect PHI*

Chris Apgar

Note: Although this article specifically addresses the management of media and devices used to store protected health information (PHI), the advice outlined could prove useful to research administrators who oversee data that should be protected whether or not the information is PHI.

— AIS editors

Technology continues to advance at a fast pace, and that can create headaches for privacy and security officers everywhere. As devices used to store confidential information get smaller and smaller, and the tiniest of storage devices can store up to several gigabytes of information, the risk for loss of confidential information continues to increase seemingly exponentially.

The HIPAA security rule specifically addresses management of media and devices used to store protected health information (PHI). Also, the Centers for Medicare and Medicaid Services (CMS) issued remote access guidelines at the beginning of 2007 that include an outline of needed safeguards when managing devices and media that will be used outside of the walls of the organization. It is clear that this is not only an area of concern from a security and privacy perspective, but also from a regulatory and legal risk perspective.

Many have heard of the loss of over a million veterans’ medical records when a Department of Veterans Affairs laptop

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Worth Noting: NIH’s ‘Commitment’ to Protecting Sensitive Data

In a posting dated April 14, 2008, that came in response to the recent theft of an NIH employee’s laptop containing patient data, the agency reports that it has

“...refocused its efforts on the protection of all information systems (electronic and hard copy) which contain sensitive personal information. Steps are currently underway at NIH to ensure that all computers, laptops and portable electronic devices are encrypted and that NIH employees are educated in the proper handling of sensitive data.

In addition, the NIH encourages grantee institutions and individuals not to use portable electronic devices to store identifiable, sensitive, and confidential information about NIH-supported research or research participants. If they must be used, they should be encrypted to safeguard data and information. These devices include laptops, CDs, disc drives, flash drives, etc. Researchers and institutions should limit access to personally identifiable information through a means of access controls such as password protection.”


*This article was written by privacy and security consultant Chris Apgar, CISSP, president of Apgar & Associates, LLC (www.apgarandassoc.com).
was stolen, and now comes the theft of the NIH laptop containing data on some 2,500 patients enrolled in a cardiac study. There also have been a number of other headlines related to the loss or theft of PHI. This doesn’t mean, though, that the headlines have prompted organizations to implement appropriate safeguards related to the use of portable devices and media.

The purpose of this article is to provide an easy-to-understand look at what is required when establishing portable device and media controls.

The protection of PHI stored on portable devices and media requires an organization to address at least the following areas:

◆ Establish and enforce device and media controls.
◆ Develop and implement appropriate workforce training.
◆ Implement and enforce encryption of data stored and transmitted.

It is important to remember that the most significant risk associated with the use of portable devices and media is directly related to people. Misuse, device/media theft, etc. are generally a people, not a technical, issue. Encryption of stored and transmitted data is important, but if the workforce member using, say, a smart phone, does not take advantage of secure means of transmission, the best encryption tools on the market are in essence useless.

**Establish and Enforce Device/Media Controls**

Establishing appropriate controls is a HIPAA security rule requirement (physical safeguards). From a practical point of view, this means, from a regulatory and legal risk perspective, strong device and media controls are in order. The regulatory requirement stretches way beyond controlling access to and the use of devices and media found in an office setting (like a desktop or a hard drive).

Establishing controls requires defining what devices and media will be used to store and transmit PHI, how the devices and media will be backed up, how they will be protected against loss or theft, how the data stored will be protected in the event of loss or theft, rules for device and media use, appropriate destruction and reuse requirements, policy and procedure development, and staff training/policy enforcement.

A good place to start would be to develop an inventory of portable devices used to transport, transmit, and store PHI (this includes personally owned devices such as smart phones, laptops, and PDAs) and the places within the organization where portable media are used (and what type of media it is). It is difficult to establish controls if the organization is unaware of what devices are in use, the type of media used, and who is responsible for their care (organization owned versus workforce member owned). It is also difficult to establish sound usage policies and procedures if the organization does not know how the devices are being used.

After compiling an inventory of devices, media, and usage, the next step is to develop a policy and procedure that defines how mobile devices and media can and cannot be used as well as the consequences for violation of the policy and procedure. Also, it is important to document the steps to be taken to protect the devices and media
and the data stored or transmitted from a mobile device. This would include addressing questions such as the following:

◆ What devices can be used to store, transmit, and transport PHI (e.g., type of device, devices owned by the organization, only laptops, etc.)?
◆ What protections need to be used with portable devices and media (e.g., encrypting data at rest and when transmitted, not leaving portable devices in open sight in a vehicle, not allowing workforce members to take portable media outside the organization unless encrypted, etc.)?
◆ What are the data backup and recovery requirements and user responsibilities?
◆ What are the data destruction and media reuse requirements and user responsibilities?
◆ What security incident response procedures will be followed if the media and/or device is lost or stolen?
◆ How will portable media and devices be stored when not in use (e.g., locking docking stations for laptops, cable locks, locked media transport, etc.)?
◆ How will compliance with the organization’s portable media and device policies, procedures, and practices be audited and enforced?
◆ How will portable media be tracked?

Appropriate controls include more than just sending a quick message to members of the workforce who use portable media and devices. It requires establishment of a structured program that addresses acquisition through end-of-life disposal and everything in between. It’s also important to note that, as with most security measures, the greatest risk is from the workforce and not from the devices used or documented destruction requirements. This is especially true with the continued rapidly expanded use of smart phones. A smart phone alone represents the risk of transmission of unencrypted PHI, the storage of unencrypted PHI, the loss or theft of the smart phone, etc. And what increases the risk even further is that smart phones generally are not owned by the organization, limiting the organization’s control over use and data/device protection.

Develop and Implement Appropriate Training

Any controls established, any policies and procedures developed, and any new device configuration requirements (e.g., encryption of all media, blocking the ability to download Internet files, etc.) will not provide any real protection until workforce members who use portable devices and media are properly trained. At least some level of training will be required for almost all workforce members. Many workforce members may not have access to a laptop used remotely, but they likely do have access to portable media used throughout the organization (e.g., CD ROMs, DVD ROMs, jump drives, SD
cards, etc.). All it takes to take the network down is using portable media to upload personal files brought from home that are infected with a virus.

As with any aspect of the security rule, the lack of appropriate staff training followed by the necessary enforcement and imposition of sanctions represents one of the most significant security risks to an organization. As an example, if a physician is not aware she should not be texting patient information regarding, say, an upcoming medical procedure to a colleague assisting with the procedure, she will continue to use the text feature of her mobile phone to transmit PHI “in the clear” or unencrypted where it could be intercepted.

Training should be thorough, cover all organizational requirements regarding portable media and device use, should specifically reference sanctions, and should not be a one-time-only event.

**Encrypt Data That Are Stored and Transmitted**

The HIPAA security rule identifies the use of encryption for stored and transmitted PHI as an addressable implementation specification. Addressable, though, does not mean optional. It means covered entities need to implement the safeguard as stated in the rule, implement a safeguard that provides equal protections, or document the heck out of why the covered entity does not intend to implement the implementation specification (keeping in mind that cost cannot be the most significant reason for not adopting the implementation specification).

The security rule was published in April 2003, allowing for the two-year compliance window for all new HIPAA Administrative Simplification rules. At the time, encryption applications were not considered completely mature, and implementation of encryption solutions could be costly from a financial and a staffing standpoint. Much has changed since April 2003. The technology has matured, and solutions exist on the market that will not break the proverbial bank for small covered entities. In fact, a number of newer portable devices on the market come with encryption functionality. Also, Windows XP Professional and Vista include the functionality to encrypt folders containing confidential information and stored on the hard drive of a laptop. There are also reasonably priced utilities on the market that can be used to encrypt portable media.

The technology and the price point today are such that a covered entity would be hard pressed to reasonably document that implementation of portable media and device encryption is not necessary or is administratively burdensome. This represents a potential regulatory problem, especially with the passage of identity theft protection laws at the state level that include provisions requiring appropriate security. Note also that CMS in its security compliance reviews will be looking at the use of encryption (see Figure 2120.2-1). The lack of encryption also represents a legal risk, not to mention the damage to an organization’s reputation, if a portable device or media is stolen, patient information is inappropriately disclosed, and the local (and sometimes national) media broadcasts the story of the theft and disclosure of sensitive patient information because the data were not protected.
Figure 2120.2-1: Security Compliance Checklist

The following items were taken from “Sample — Interview and Document Request for HIPAA Security Onsite Investigations and Compliance Reviews.” You can view the entire list at www.cms.hhs.gov/Enforcement/Downloads/InformationRequestforComplianceReviews.pdf.

◆ Policies and procedures and other evidence that address the following:
  • Prevention, detection, containment, and correction of security violations
  • Employee background checks and confidentiality agreements
  • Establishing user access for new and existing employees
  • List of authentication methods used to identify users authorized to access EPHI
  • List of individuals and contractors with access to EPHI to include copies pertinent business associate agreements
  • List of software used to manage and control access to the Internet
  • Detecting, reporting, and responding to security incidents (if not in the security plan)
  • Physical security
  • Encryption and decryption of EPHI
  • Mechanisms to ensure integrity of data during transmission - including portable media transmission (i.e. laptops, cell phones, blackberries, thumb drives)
  • Monitoring systems use — authorized and unauthorized
  • Use of wireless networks
  • Granting, approving, and monitoring systems access (for example, by level, role, and job function)
  • Sanctions for workforce members in violation of policies and procedures governing EPHI access or use
  • Termination of systems access
  • Session termination policies and procedures for inactive computer systems
  • Policies and procedures for emergency access to electronic information systems
  • Password management policies and procedures
  • Secure workstation use (documentation of specific guidelines for each class of workstation (i.e., on site, laptop, and home system usage)
  • Disposal of media and devices containing EPHI

◆ Other Documents
  • Entity-wide Security Plan
  • Risk Analysis (most recent)
  • Risk Management Plan (addressing risks identified in the Risk Analysis)
  • Security violation monitoring reports
  • Vulnerability scanning plans
    ◆ Results from most recent vulnerability scan

continued
Figure 2120.2-1: Security Compliance Checklist (continued)

- Network penetration testing policy and procedure
  - Results from most recent network penetration test
- List of all user accounts with access to systems which store, transmit, or access EPHI (for active and terminated employees)
- Configuration standards to include patch management for systems which store, transmit, or access EPHI (including workstations)
- Encryption or equivalent measures implemented on systems that store, transmit, or access EPHI
- Organization chart to include staff members responsible for general HIPAA compliance to include the protection of EPHI
- Examples of training courses or communications delivered to staff members to ensure awareness and understanding of EPHI policies and procedures (security awareness training)
- Policies and procedures governing the use of virus protection software
- Data backup procedures
- Disaster recovery plan
- Disaster recovery test plans and results
- Analysis of information systems, applications, and data groups according to their criticality and sensitivity
- Inventory of all information systems to include network diagrams listing hardware and software used to store, transmit or maintain EPHI
- List of all Primary Domain Controllers (PDC) and servers
- Inventory log recording the owner and movement media and devices that contain EPHI
\[\text{2120.3} \quad \text{Tax Reporting Obligations for Payments to Clinical Research Subjects} \]

AIS editors

Many institutions make payments to individuals who voluntarily participate in clinical research studies or trials. Whether these payments represent taxable income to these individuals has often been asked. Further, if the payments are taxable to the recipient, what then are the institution's withholding and reporting obligations?

The Internal Revenue Service (IRS) in Industry Management Resolution System (IMRS) Document No. 0700000417 addresses where to report such payments on the Form 1099-MISC, so it would seem that the form is required for such individuals (see Figure 2130.3-1). (IMRS responds to issues identified by tax professionals as requiring resolution.) The question before the IRS was where on the 1099 the payments should be reported: — Box 7 ("Non-employee Compensation") or Box 3 ("Other Income").

According to the IRS, if the individual is engaged in a trade or business as an independent contractor, the institution should report the payment in Box 7; the payment will likely be subject to self-employment tax. If, however, the individual is not an independent contractor, the payment is reported in Box 3. The IRS, apparently assuming that most individuals receiving clinical research payments will not be treated as independent contractors, recommends that the payments be reported in Box 3 of the Form 1099-MISC “to avoid creating the presumption that these payments are, in fact, subject to the [self-employment] tax.”

Thus, it would appear that a payment made to an individual clinical research subject who is not engaged in the trade or business of being a research subject (1) would represent taxable income to the individual research subject but is not subject to FICA or self-employment tax; (2) would not require an institution to withhold tax from the payment made to the individual; and (3) should be reported by an institution if the payment is $600 or more in Box 3 of Form 1099-MISC. (The general threshold for issuing a 1099 is $600.)

(For additional background on the topic, see also a 1990 private letter ruling, PLR 9106004.)

Statement in Form 1099-MISC. This IMRS memorandum is a relatively obscure document on which some institutions may have been hesitant to rely. But the IRS now has resolved possible ambiguity on this reporting issue by stating in the instructions to the 2009 Form 1099-MISC that Box 3 should be used to report “[a] payment or series of payments to individuals for participating in a medical research study or studies.” The Form1099-MISC instructions are posted on the IRS Web site (www.irs.gov) under “Forms.”
Figure 2120.3-1: IMRS 0700000417 – Proper Reporting of Payments to Participants in Medical Research Studies

Issue: Practitioners report that some payors to participants in medical research studies report the payments on Form 1099 MISC Miscellaneous Income in Box 7, Non-employee Compensation, rather than Box 3, Other Income. This may result in the recipients incorrectly reporting the income on their returns.

Response: In some cases, fees paid to a participant in a medical research study may be subject to Self Employment Contributions Act (SECA) tax because the participant is engaged in a trade or business of participating in medical research studies. However, in many cases, the payor will not know whether the participant is engaged in the trade or business of participating in medical research studies. Therefore, to avoid creating the presumption that these payments are, in fact, subject to the SECA tax, the payments should be reported in Box 3 of Form 1099 MISC. As always, a taxpayer with amounts reported in Box 3 of a Form 1099-MISC must determine whether such amounts are subject to SECA tax based on his or her own circumstances. We will recommend adding this information to the Form 1099 MISC instructions.

(This document is posted on the IRS Web site at www.irs.gov/businesses/small/article/0,,id=177228,00.html.)
Observations on ORI Clinical Research Misconduct Cases*

Office of Research Integrity

Over a 16-year period (1993–2008), there have been on average 3.5 Public Health Service (PHS) findings of research misconduct per year on clinical cases handled by the Office of Research Integrity (ORI). Overall, the 63 clinical cases represent one third of all PHS ORI misconduct findings (63/195).

Clinical research involves studies with people to learn about the disease process and how to treat diseases. In order to determine efficacy of a treatment, these studies are often designed to include people without the disease as control subjects. Clinical research can also be aimed at disease prevention, studying physiological parameters, or examining specimens from people.

Clinical cases with a finding of research misconduct have an unusual difference from other ORI misconduct cases. The allegations of misconduct in clinical cases are proportionately more likely to be determined to be misconduct by ORI. Specifically, 72% of clinical allegations resulted in a misconduct finding compared with 29% for all other types of research misconduct. What would account for this difference?

Clinical trials, a type of clinical case, generally involve more people who can see the research records and underlying source documents. Since there are requirements on how to keep proper records, such as the Food and Drug Administration’s good clinical practice (GCP) or the trials’ protocol specifications, team members are more likely to know the established rules for records. Dr. Peter Abbrecht, Medical Expert, Division of Investigative Oversight (DIO), points out that although staff have different roles to perform on a clinical trial, they have opportunities to observe others actually breaking the protocol rules. In one case, a technician was unable to draw a blood sample in the presence of another team member, yet a sample was submitted for analysis and later determined to be the technician’s own blood. The team member who observed this act was alerted to the falsification and reported it. In another case, the research assistant who had been asked to generate a report on subjects in the study noted that new patients had suddenly been entered into the study by the investigator. The research assistant examined source data and determined that the cases had been fabricated. Audits also are more commonly done in clinical research; there are internal and external auditors who have defined roles to examine the source data for omissions, irregularities, deviations, non-compliance with protocol, etc.

Audits are such a powerful determinant that ORI advises institutions that an audit report in a clinical study may obviate the need for an inquiry, when the audit has uncovered evidence of possible research misconduct.

Dr. Linda Youngman, DIO Scientist-Investigator, believes that: “The high proportion of allegations that are determined to be misconduct is a testament to the fact that emphasis on regular audits in clinical trials, which help to detect problems early, is a key ingredient to preventing research misconduct.”

Prosecuting clinical cases also differs from other types of misconduct. Clinical trials are easier to show “intent” to fabricate or falsify because there are numerous and obvious ways that the data can be manipulated to lead to desired goals. Dr. Nancy Davidian, DIO, Deputy Director, reports that: “While research misconduct occurs at all stages of clinical trials (eligibility, treatment, post-treatment, and follow-up), the most commonplace misconduct is at the time of enrollment.” DIO speculates that falsification and fabrication of eligibility occur because there is often enormous pressure to enroll subjects and there may be per capita rewards attached to each study subject’s enrollment. This in part explains further why clinical trial cases are different from bench science cases.

John Dahlberg, Director of DIO, points out that: “We know that audits in clinical trials make a difference and that if institutions required audits, they would be more likely to find correctable problems, as well as research misconduct. When they require more monitoring and auditing of research records, then ORI will have more confidence that research misconduct is appropriately being detected.”

It is unfortunate that bench research does not have markers comparable to clinical research which can be more easily audited. This may evolve as institutions or groups routinely learn to use electronic lab notebook systems that will allow more people to have the opportunity to review and evaluate the records of others in the group. In the meantime, we must rely on the lab director to create an atmosphere that limits opportunities to cheat and that requires ongoing participation with an advisor, particularly concerning the examination of source data and establishing and enforcing standards.
Figure 2120.4-1: ‘Observations’ on Research Misconduct

The following data is taken from a 2008 report of a survey undertaken by The Gallup Organization for the Office of Research Integrity. The study looked at scientists’ reports on suspected research misconduct. In 2005, an anonymous survey “was mailed to 4,298 randomly selected principal investigators of NIH-funded research grants (R01) who worked in 4,298 unique departments at 605 universities, institutes, hospitals and other organizations. 2,226 scientists returned completed surveys. For more on the results of the survey, see Final Report: Observing and Reporting Suspected Misconduct in Biomedical Research, http://ori.hhs.gov.

Examples of Misconduct

The following are among the instances that respondents to the survey cited that analysts involved in the study said met the federal definition of “research misconduct.” They show that misconduct is being conducted by all levels of researchers — from students and lab techs to postdocs and senior faculty. No type of research appears immune, as reports concern basic science, clinical trials, as well as animal research studies.

◆ Colleague omitted data points that nullified hypothesis.
◆ Colleague downloaded files from junior faculty’s grant into his to edit and modify.
◆ Colleague duplicated results between three different papers but differently labeled data in each paper.
◆ Colleague appropriated unpublished data from another lab without permission.
◆ Student plagiarized extensively in a senior research paper.
◆ Colleague used “Photoshop” to eliminate background bands on Western blot to make the data look more specific than what they were.
◆ Colleague dropped subjects from a study in order to obtain significant group differences; these data were published.
◆ Lab technician was stealing subject fees and then fabricated data so the number of subjects would match the subject payments.
◆ Research assistant entered values for a test without conducting the test.
◆ Postdoc altered data in notebook; this changed the interpretation of the experiments.
◆ Implanted surgical materials and inflammatory responses were misrepresented in reporting animal study outcomes.

continued
Steps Researchers Can Take to Prevent or Reduce Misconduct

The respondents to the survey suggested the following, when asked to recommend ways to thwart misconduct in their own group. (The wording is how it appears in the survey report.)

1. Review/audits/examine
2. Discuss/communication/meeting/ask questions
3. Supervision/monitoring/close contact
4. Good model/ethical model/honesty
5. Training/education/emphasize seriousness
6. Be involved/informed/knowledgeable/familiar
7. Reproduce study
8. Value quality/negative results/no blame
9. Good environment/low pressure
10. Vigilance/watchful/aware/skeptical

Other strategies cited: work in teams; enforce penalties and have zero tolerance for misconduct; and investigate before you hire staff.

Top 10 Strategies to Increase Chances of Misconduct Reporting

1. Protected, anonymous reporting
2. Training/education/emphasize seriousness
3. System for reporting/someone to report to
4. Clear policy and procedures/guidelines
5. Discuss/open communication/meeting/ask questions
6. Review/audits/look for things that don’t fit
7. [Emphasize] responsibility [with] staff/require, encourage reporting
8. Character/ethical model/honesty
9. Good environment/low pressure
10. [Emphasize] scientific/research integrity/threat to science

Top 10 Ways to Detect Research Misconduct

1. Supervision/Observation/Oversight/Responsibility of PI
2. Review Data/Controls (Data Specific)
3. Discuss/Open Communication/Meeting
4. Reproduce Study/Support by Other Methods
5. Review (other)/Audits/Evaluations/QC/Investigations
6. Interview/Ask Questions/Listen
7. Be Involved/Informed/Knowledgeable/Familiar
8. Vigilance/Watchful/Aware/Skeptical
9. Training/Education/Clear Policies
10. Protected Reporting/Anonymous
Research Strategies for Academic Medical Centers: A Framework for Advancements toward Translational Excellence

Rand Haley, ECG Management Consultants, and Thomas J. Champagne, Jr., Rush University Medical Center

Abstract

This review article presents a simplified framework for thinking about research strategy priorities for academic medical centers (AMCs). The framework can serve as a precursor to future advancements in translational medicine and as a set of planning guideposts toward ultimate translational excellence. While market pressures, reform uncertainties, institutional economics, and the move to a value-based environment have firmly pushed clinical strategy to the forefront of AMC planning, research strategic planning remains vitally important, especially for AMCs with significant research enterprises.

A “research strategy DNA” framework can help leadership and faculty toward a shared understanding of their current position and help inform their future strategic priorities in light of rapidly changing environments. Six common strategic elements are outlined in the framework: (1) research faculty, (2) research infrastructure and space, (3) research organizations, (4) research focus areas, (5) research teams, and (6) research partnerships. AMC thinking along these elements is guided by two strands: (1) pursuit of excellence, and (2) strategic stewardship.

Building on this framework, three areas of emerging strategic attention (yet underrepresented in current AMC research strategies) are introduced: research business models, translational organizational structures, and philanthropic agility.

Introduction

While healthcare market competitive pressures and reform uncertainties—and the move to a value-based environment—have firmly pushed clinical strategy to the forefront of academic health planning, research strategic planning remains vitally important, especially for academic medical centers (AMCs) with significant research enterprises. The intertwined scientific, organizational, and financial intricacies of clinical and research enterprises are complex, and their combined strategies will play important roles in AMC sustainability and differentiation. Increasingly, the effectiveness of research strategic planning is having an impact on patient choice, outcomes, and translational excellence.

This review article presents a simplified framework for organizing and focusing AMC research enterprise priorities—a framework that can be thought of as the “research strategy DNA” of AMCs. While a number of articles have been written about AMC research enterprise management (Mallon, 2007), overbuilding (Alberts, 2010), right-sizing (Lee, 2013), and related topics, this framework offers a means of organizing the many elements that AMC leadership and faculty should consider as they chart their future research enterprise trajectories. Increasingly, these trajectories must

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demonstrate progress along translational medicine fronts to ensure continued institutional investment in research enterprise development, align with persistent patient care priorities, and prevent a decoupling of clinical and research enterprise finances.

**Research Strategy DNA Framework**

The introduced framework combines the authors’ AMC research strategy experience with review of selected strategic plans from AMCs with major research enterprises. The common, central strategic elements found across these and other plans have been extracted into a simplified framework along which research investments have been focused. However, with significant mission and economic pressures bearing down on research enterprises, these central elements, while still required, will not be sufficient as AMC leadership and faculty develop future research strategies. In particular, three additional areas for future strategic attention are identified alongside the framework—areas that are underrepresented in current plans: research business models, translational organization structures, and the importance of philanthropy.

Six common strategic elements are outlined in the framework (Figure 2120.5-1), with these elements forming the “base pairs” of research strategy DNA. The base pairs are structurally supported by two “strands” that guide AMCs’ research thinking: the pursuit of excellence and strategic stewardship. Pursuit of translational research excellence is a fundamental tenet of AMCs and one that continues to promise the opportunity to differentiate AMCs relative to other healthcare providers in the market. Strategic stewardship refers to the increasing emphasis on research effectiveness and efficiency alongside the realization that while research is an inherently nonlinear, inefficient activity, there are limited resources for investment in the enterprise—investments that are made in an environment of numerous competing interests.

1. **Research Faculty**

Support for faculty over the duration of their careers—from recruitment and start-up to junior faculty development to funding gap challenges—is a central element across AMC research strategies and deserves this pole position. AMCs recognize the importance of recruiting and retaining high-performing research faculty, and faculty with strong team-building capabilities are increasingly valued. The competitive external research funding environment, and the lack of clear, sustainable solutions to address prolonged research funding gaps, is a challenge driving AMCs to emphasize faculty return on investment and ability to compete for larger-scale, complex, and team-based funding opportunities.

   Successful AMCs are devoting attention to coordinating faculty recruitment, and their strategic plans characterize junior faculty as investments and describe programs designed to support junior faculty development. Examples include linking junior faculty with experienced faculty possessing strong National Institutes of Health (NIH) funding histories, offering competitive internal seed grants, and establishing clinical scholar awards that provide release time for junior clinical faculty with demonstrated research abilities.

   A limited number of AMCs are also exploring the extension of perfor-
mance-based faculty metrics and compensation approaches from the clinical realm to research. Elements include developing metrics to measure faculty research performance (at the individual investigator and academic unit levels), connecting these metrics to commonly-used clinical RVUs (Relative Value Units), integrating tracked research metrics into performance evaluation, and revising faculty compensation plans to reward research performance across the basic, translational, and clinical sciences.

Other increasingly strategic elements for faculty success are comprehensive faculty mentoring programs—programs that intend to help recognize early strengths and research interests that can be complementary to an AMC’s research strategy. Also, faculty committee service models, tenure designs, instruction/teaching modalities, and other forms of faculty citizenship are gaining strategic importance as AMCs continue to maneuver among the challenges of a demanding landscape.

2. Research Infrastructure and Space

Shared research infrastructure and core research facilities are a strategic focus of many AMCs. Plans reveal emphasis on enhanced research infrastructure investment in concert with improved management of cores along organizational, governance, and financial dimensions. The following description from one plan highlights some of the challenges and opportunities (University of North Carolina, 2012):
While this infrastructure has enabled our faculty to engage in cutting-edge and innovative research, the proliferation of cores and lack of central oversight have led to resource duplication, unnecessary administrative burden and an environment in which cores are often only evaluated in a reactive manner (e.g., efforts to save a core which has run continued annual deficits) rather than proactively. In order to streamline core facilities and platforms and shift institutional attention from putting out fires to evaluating core investments strategically, a process of centralization and consolidation of research core facilities will be initiated.

Investment areas span the basic, translational, and clinical research domains and include biomedical research cores, enhanced imaging cores, tissue procurement capabilities, clinical and laboratory repositories (including biobanks or biorepositories), animal models, and clinical trials infrastructure.

Extending from infrastructure to research space, plans are increasingly attentive to more data-driven research space allocation, re-allocation, and utilization approaches. While a number of AMCs have overbuilt their research enterprises, others have ambitious plans to construct additional research space. Institutions have also begun to evaluate the merits of co-owning/developing research spaces, along with the economic viability of continuing research “incubators” and other scaling facilities. Despite these differences, a constant focus remains: the need for more strategic understanding and decision-making related to available research space and its contribution to impactful, economic, and productive research.

3. Research Organizations

The organization of some AMC research activities into centers, institutes, or other organizational structures represents another key element observed across strategic plans, with a focus on how well-designed organizational structures can enhance research productivity, effectiveness, and efficiency.

Multiple plans identify centers and institutes as important to linking basic and clinical research and to improving the translation of research into improved clinical care. Plans call for establishing or enhancing organizational structures to target these and other research goals. Successful plans are also increasingly focused on objective, transparent, and formal review of research centers and institutes as well as traditional academic departments. As summarized in one plan (University of Pennsylvania, 2013):

Sustained success requires ongoing realignment of priorities and flexibility to invest in developing areas of scientific inquiry and clinical medicine. To this end, we will undertake a rigorous and metric based review of the current center and institutes’ activities, impact, and governance to ensure continued alignment with the institution’s strategic priorities and objectives.

4. Research Focus Areas
Almost universally, leading AMC strategic plans identify a select number of research focus areas for institutional investment and development. Efforts typically focus on strengthening existing competitive research niches, areas of critical faculty mass, and areas of emerging research opportunity in the funding landscape that simply cannot be ignored.

Specific areas identified in the sampled plans range from the basic sciences to population health research (Figure 2120.5-2). Cutting across research domains, a number of AMC plans focus on areas such as establishing leadership positions in bioinformatics or biomedical informatics. Other cross-cutting research areas receiving attention include data-intensive science and personalized or individualized medicine. Per the sampled plans, selected research focus areas include those listed in the table below:

<table>
<thead>
<tr>
<th>Basic Sciences</th>
<th>Translational</th>
<th>Clinical</th>
<th>Population Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>Genomics</td>
<td>Biostatistics</td>
<td>Personalized diagnostics</td>
<td>Outcomes research</td>
</tr>
<tr>
<td>Stem cells</td>
<td>Computational sciences in support of</td>
<td>Degenerative and regenerative medicine</td>
<td>Comparative effectiveness research</td>
</tr>
<tr>
<td>Bioengineering</td>
<td>translational research</td>
<td>Clinical decision-making research</td>
<td>Research related to the delivery and financing of</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>healthcare</td>
</tr>
</tbody>
</table>

All of these research areas of concentration tend to impact research strategic planning within AMCs. Additionally, fiscal realities, clinical priorities, and the previously mentioned limited resource availability all have undeniable influences on the strategic priorities and planning processes for AMCs.

5. Research Teams

Proactive investment in supporting research teams is an institutional priority across a number of AMC plans. These plans often call for developing and improving research development offices and functions. Within these offices, support is provided to help identify and bring together teams of complementary investigators (from the
basic, clinical, and/or population health research domains) and help the teams more effectively identify, plan, and compete for complex, large-scale, and often multidisciplinary funding opportunities. Mentoring programs, young investigator forums, grantsmanship training, and incentive programs that reward teams (over individual investigator-initiated activities) are all additional strategic opportunities that widen and deepen the corpus of research excellence at institutions.

6. Research Partnerships

Research partnerships are positioned in strategic plans as ways to both strengthen research capabilities and attract external funding from sources beyond the NIH and other federal funding streams. Partners include state and local organizations, industry, and international collaborators (Figure 2120.5-3). At the state and local levels, identified partnership opportunities include other schools in the university, other academic institutions in the area, AMC-affiliated hospitals and health systems, and independent research institutes. On the industry side, stated partnership goals include support for clinical research and assistance with the translation of research discoveries into technologies that will benefit future patient care. Whether their clinical operations are globally engaged or not, some AMC plans call for research-focused international partnerships, ranging from basic research collaborations to partnerships focused on clinical research and/or public health.

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**Figure 2120.5-3: Research Partnerships**

<table>
<thead>
<tr>
<th>Research Partnerships</th>
</tr>
</thead>
<tbody>
<tr>
<td>» Local organizations</td>
</tr>
<tr>
<td>» Academic institutions</td>
</tr>
<tr>
<td>» Affiliated hospitals and research institutes</td>
</tr>
<tr>
<td>» Industry</td>
</tr>
<tr>
<td>» International collaborators</td>
</tr>
</tbody>
</table>

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**Conclusion and Areas for Future Strategic Attention**

The research strategy DNA framework presented here can help leadership and faculty toward a shared understanding of their current position and help inform their future investments in light of rapidly-changing research, clinical, and academic environments. As AMCs continue their research strategy explorations, there are three areas that are of great importance yet underrepresented in current research strategic plans: research business models, translational organizational structures, and philanthropic agility (including the important role philanthropic efforts can play in plan design, flexibility, and ultimate achievement). Introduced below, these areas are expected to be key considerations for AMCs over the next several years.
1. Research Business Models

The traditional business models of AMC research enterprises, characterized by significant support from clinical revenue-sharing, are simply not sustainable. AMCs are facing increasing demands for institutional resources to support research enterprises struggling in a period of extremely competitive external funding. These demands include resources to support faculty and other researchers who have lost grant support, shared research infrastructure, and other elements. At the same time, AMCs are experiencing or expecting significant pressures on resources from the clinical operations on which they have historically relied on to support their research missions.

While improved strategic stewardship of research (for example, efficiencies gained from consolidating overlapping core research facilities) can be helpful, major changes will be needed to craft innovative, new research business models within AMCs (e.g., shared services). Research incentives, including enhanced funds-flow / change-in-net-asset models for research budgeting, creative release-time models, and an increased institutional appetite for loss-leading exploratory research, will all have to be considered. Finally, while financial pressures are particularly challenging for the basic sciences, the new business models must span research domains. The blueprints for these changes are at best in their infancy; a combination of creativity and strong leadership will be needed to reshape academic healthcare research business models in truly productive, sustainable ways.

2. Translational Organizational Structures

More rapid translation of research discoveries into improved patient care has the potential to become a valuable differentiator for AMCs’ clinical enterprises. Translational medicine can allow AMC research enterprises to demonstrate their key institutional importance to both mission and financial contribution. This said, the pace and success of translation have not yet achieved their potential: discoveries are slow to market, patent persecution is complex, and innovation pipelines are continuously pressured by time and expectations for returns on investment. Future attention must be dedicated to experimenting with more innovative organizational structures and incentive systems for linking researchers and clinicians and improving translational medicine. AMCs are particularly well-positioned for these efforts (Brenner, 2012):

Translational medicine is an opportunity that we cannot miss. This is truly a unique niche for academic medical centers and clinician scientists. It requires the intensive analysis and treatment of well-pheno-typed patients, which is something that neither freestanding research institutions nor community hospitals can do.

There are promising glimpses of this at a number of AMCs, including centers and institutes supported by NIH-funded Clinical and Translational Science Awards. However, greater creativity and willingness to experiment with novel organizational structures—even if some of these attempts fail—will be required to make measurable impacts on AMC research and clinical distinction.
3. Philanthropic Agility

Increasingly, the role of philanthropy is being prioritized in the strategic planning requirements of AMCs. Today’s strategic plans assuredly include derived financial plans to support the intended efforts; increasingly, financial plans provide a key role for philanthropy and fundraising. Successful research strategic plans place a portion of the strategic priorities “at risk” and subject to the institution’s ability to raise unrestricted (or limited restriction) funding. This serves to enhance plan agility and allow higher risk (and more rewarding) components to be developed within research strategic plans.

Philanthropic efforts can be valuable to all AMC entities and research missions. For example, grateful patients can seed clinical research efforts with bequests, industry investments can fiscally support new devices closer to market launch, and other forms of industry partnership can bring needed laboratory equipment in-house. Successful philanthropic roles in the strategic planning process can also infuse flexibility into research efforts, relax expectations to make room for creativity, and provide a fiscal backstop for managing unexpected, sometimes expensive research program contingencies.

Endnote

1. Methodology: A qualitative review of strategic plans from AMCs with leading research enterprises was conducted. Publicly available strategic plans from seven AMCs and/or schools of medicine (SOMs) were accessed from universities whose SOMs ranked in the top 15 in fiscal year 2014 research expenditures. While the explored plans varied in format and level of detail, a number of commonalities emerged relating to their research enterprise strategies. Among the seven plans, all written in 2011 or later, six were developed at the AMC level and one at the SOM level. Four of the plans were from private institutions, and three were from public institutions. The sample of seven research strategic plans represented the following universities: University of California, San Francisco; Johns Hopkins University; University of Pennsylvania; University of Michigan; University of North Carolina at Chapel Hill; Northwestern University; and University of California, Los Angeles.

Literature Cited


**About the Authors**

**Rand Haley** is a Senior Manager at ECG Management Consultants. He has devoted his career to helping organizations strengthen their research enterprises. Rand has over 15 years of experience providing strategy and management consulting services to research universities, AMCs, hospitals, health systems, and independent research institutes. He earned an M.S. in biochemistry and molecular biophysics from the University of Pennsylvania; an M.A. in science, technology, and public policy from The George Washington University; and a B.S. in physics from the Georgia Institute of Technology.

**Thomas J. Champagne, Jr.,** is Chief Research Administrator and Associate Vice President at Rush University Medical Center. His 31-year professional tenure, dedicated to research and academic affairs, includes time with the Howard Hughes Medical Institute, Emory University, McKinsey & Company, and Huron Consulting. He received his B.B.A. in management from Sam Houston State University and his MBA from Hood College.
This section includes practical guidance and tools — reports, flowcharts, checklists, etc. — relating to issues concerning academic medical centers. This material is culled from a variety of authoritative sources.

Conflicts of Interest in Academia-Industry Biomedical Research

The possibility of financial conflicts of interest (FCOI) in the research endeavor is always present, and as academia-industry relationships increase, so too the level of concern with financial conflicts of interest. (For a broader discussion of financial conflict of interest compliance, see ¶1530.1.)

Since the National Institutes of Health (NIH) “Objectivity in Research” or conflict of interest regulations were published in 1995, developing appropriate policies and practices concerning financial conflicts of interest affecting sponsored research has been a priority for colleges and universities. Continued media coverage of real or perceived COI associated with university investigators and clinicians and recent congressional interest in the topic, as well as the scrutiny on and by NIH, the topic serve as reminders to institutions of the importance of this topic.

New Regulations Issued


The rule updates the existing regs because “interactions among government, research institutions, and the private sector have become increasingly complex. This complexity, as well as a need to strengthen accountability, led to changes that expand and add transparency to” principal investigators’ disclosure of significant financial interests and “enhance” compliance and institutional oversight and management of FCOI, according to the regs. In a recent blog posting, NIH Office of Ex-
tramural Research Deputy Director Sally Rockey said that also driving the changes “has been increased scrutiny of investigators’ financial relationships from Congress and the public” (http://nexus.od.nih.gov/all/rock-talk).

For the most part, the final rule closely follows the notice of proposed rulemaking published in May 2010. (Figure 2130.1-1 describes some of the major changes included in the final rule.)

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### Figure 2130.1-1: HHS FCOI Regulations: 1995 Requirements versus 2011 New Rulemaking

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Significant Financial Interests Threshold</strong></td>
<td></td>
</tr>
<tr>
<td>De minimis threshold of $10,000 for disclosure generally applies to payments or equity interests.</td>
<td>De minimis threshold of $5,000 for disclosure generally applies to payments for services and/or equity interests. Includes any equity interest in non-publicly traded entities.</td>
</tr>
<tr>
<td><strong>Which SFIs Need to Be Disclosed (once threshold is met)</strong></td>
<td></td>
</tr>
<tr>
<td>Only those SFI the investigator deems related to the PHS-funded research.</td>
<td>Institutional responsibilities means an investigator’s professional responsibilities on behalf of the institution, and as defined by the institution in its policy on financial conflicts of interest, which may include for example: activities such as research, research consultation, teaching, professional practice, institutional committee memberships, and service on panels such as institutional review boards or data and safety monitoring boards.</td>
</tr>
<tr>
<td><strong>Excluded From Disclosure Requirement</strong></td>
<td></td>
</tr>
<tr>
<td>Income from seminars, lectures, or teaching, and service on advisory committees or review panels, for public or nonprofit entities.</td>
<td>Income from seminars, lectures, or teaching engagements sponsored by and service on advisory or review panels for a federal, state, or local government agency, an institution of higher education as defined at 20 USC 1001(a), an academic teaching hospital, a medical center, or a research institute that is affiliated with an institution of higher education.</td>
</tr>
<tr>
<td><strong>Types of SFI Excluded</strong></td>
<td></td>
</tr>
<tr>
<td>All forms of remuneration are included. (Topics such as mutual funds and blind trusts are addressed in FAQs on the NIH website.)</td>
<td>Excludes income from investment vehicles, such as mutual funds and retirement accounts, as long as the investigator does not directly control the investment decisions made in these vehicles.</td>
</tr>
<tr>
<td><strong>Travel Reimbursements and Sponsored Travel</strong></td>
<td></td>
</tr>
<tr>
<td>Travel reimbursement is not mentioned explicitly in the regulations but is not excluded from the SFI definition.</td>
<td>Disclose the occurrence of any reimbursed travel or sponsored travel related to institutional responsibilities (including purpose of trip, sponsor/organizer, destination, and duration). NOT required to disclose travel that is reimbursed or sponsored by a federal, state, or local government agency, an institution of higher education as defined at 20 USC 1001(a), an academic teaching hospital, a medical center, or a research institute that is affiliated with an institution of higher education. The institution will determine if any travel requires further investigation, including determination or disclosure of the monetary value.</td>
</tr>
<tr>
<td><strong>Information on an Identified FCOI Reported by the Institution to PHS Awarding Component</strong></td>
<td></td>
</tr>
</tbody>
</table>

- Grant/contract number
- Project director/principal investigator or Contact PD/PI
- Name of investigator with FCOI
- Whether FCOI was managed, reduced, or eliminated

**Initial Report. Requirements in 1995 reg, plus**

- Name of the entity with which the investigator has a FCOI
- Nature of FCOI, e.g., equity, consulting fees, travel reimbursement, honoraria
- Value of the financial interest $0-4,999; $5,000-9,999; $10,000-19,999; amount between $20,000-$100,000 by increments of $20,000; amounts above $100,000 by increments of $50,000 or statement that a value cannot be readily determined.
- A description how the financial interest relates to PHS-funded research and the basis for the institution’s determination that the financial interest conflicts with such research
- Key elements of the institution’s management plan

**Annual Report**

- Status of the FCOI
- Changes to the management plan

(continued)
Table 2130.1-1, continued

<table>
<thead>
<tr>
<th>Subrecipient Institutions/Investigators</th>
<th>Institutional ‘Management’ of Identified FCOI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutions must take reasonable steps to ensure that investigators working for subs comply with the regs by requiring those investigators to comply with the institution’s policy or by requiring the entities to provide assurances to the institution that will enable the institution to comply with the regs.</td>
<td>For an identified FCOI, an institution must develop and implement a management plan that shall specify the actions that have been, and shall be, taken to manage such FCOI. (See also “Retrospective Review” below.)</td>
</tr>
<tr>
<td>- Incorporate as part of a written agreement terms that establish whether the FCOI policy of the awardee institution or that of the subrecipient will apply to subrecipient Investigators and include time periods to meet disclosure and/or FCOI reporting requirements.</td>
<td></td>
</tr>
<tr>
<td>- Subrecipient institutions that rely on their FCOI policy must report identified FCOIs to the awardee institution in sufficient time to allow the awardee institution to report the FCOI to the PHS Awarding Component (e.g., NIH through the eRA Commons FCOI Module) to meet reporting obligations.</td>
<td></td>
</tr>
</tbody>
</table>

| Manner of compliance with regs not specified (“manage, reduce, or eliminate” are options). | Institution is required to conduct a retrospective review in those cases of non-compliance with the regulation but is not required to report the review to the PHS Awarding Component. The institution will be required to notify the PHS Awarding Component promptly and submit a report to the PHS Awarding Component only in cases where bias is found. The report will address the impact of the bias on the research project and the actions the institution has taken, or will take, to eliminate or mitigate the effect of the bias. |

| Retrospective Review (“Mitigation plan” discussed in proposed rules) |  |
| - Not mentioned |  |

| Public Accessibility |  |
| - No requirement | Make certain information available concerning identified FCOIs held by senior/key personnel via a publicly accessible website or by a written response to any requestor within five business days of a request, and update such information as specified in the rule. This information will include at a minimum the investigator’s name; the investigator’s title and role with respect to the research project; the name of the entity in which the SFI is held; the nature of the SFI; and the approximate dollar value of the SFI, or a statement that the interest is one whose value cannot be readily determined through reference to public prices or other reasonable measures of fair market value. Senior/key personnel means the PD/PI and any other person identified as senior/key personnel by the institution in the grant application, progress report, or any other report submitted by the institution under the regulations. |

| FCOI Training | Each investigator must complete training prior to engaging in research related to any PHS-funded grant or contract and at least every four years, and immediately under the designated circumstances: |
| - Institutional FCOI policies change in a manner that affects investigator requirements |  |
| - An investigator is new to an institution |  |
| - An institution finds an investigator noncompliant with its FCOI policy or management plan. |  |

Compliance Date for New Rule. Although the rule has an “effective” date of Sept. 26, the “compliance dates” for applicant institutions are Aug. 24, 2012, and “immediately” after an institution makes its FCOI policy publicly accessible as described in the regulation. NIH, in reviewing the over 100 comments received in response to the proposed rules, decided not to extend the implementation date beyond one year, as suggested by several commenters.

The revised regulations will apply to each grant or cooperative agreement with a Notice of Award issue date after the compliance date of the final rule (including noncompeting continuations) and to research solicitations issued and contracts awarded subsequent to that date, the rule states.

Until August 2012, grantees are to remain in compliance with the 1995 regulations.

Figures 2130.1-2 – 2130.1-3 provide overviews of the new requirements and were created by NIH.

<table>
<thead>
<tr>
<th>Report</th>
<th>Content</th>
<th>Required when?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial FCOI Report</td>
<td>• Grant number&lt;br&gt;• PI&lt;br&gt;• Name of entity with FCOI&lt;br&gt;• Nature of FCOI&lt;br&gt;• Value of financial interest (in increments)&lt;br&gt;• Description of how financial interest relates to research&lt;br&gt;• Key elements of management plan</td>
<td>• Prior to expenditure of funds&lt;br&gt;• Within 60 days of any subsequently identified FCOI</td>
</tr>
<tr>
<td>Annual FCOI Report</td>
<td>Status of FCOI and changes to management plan</td>
<td>Annual report due at same time as when submitting annual progress report, multi-year progress report, or at time of extension</td>
</tr>
<tr>
<td>Revised FCOI Report</td>
<td>If applicable, update a previously submitted FCOI report to describe actions that will be taken to manage FCOI going forward.</td>
<td>After completion of retrospective review, if needed</td>
</tr>
<tr>
<td>Mitigation Report</td>
<td>• Project number&lt;br&gt;• Project title&lt;br&gt;• Contact PI/PD&lt;br&gt;• Name of investigator with FCOI&lt;br&gt;• Name of entity with FCOI&lt;br&gt;• Reason for review&lt;br&gt;• Detail methodology&lt;br&gt;• Findings and conclusion</td>
<td>When bias is found as a result of a retrospective review.</td>
</tr>
</tbody>
</table>
Institutions must
• Establish standards that provide a reasonable expectation that the design, conduct, and reporting of NIH-funded research will be free from bias resulting from investigator financial conflicts of interest.
• Maintain an up-to-date, written, enforced policy that complies with the FCOI regulation and make it available via a publicly accessible website.

Records Maintenance
Maintain records of all investigator disclosures of financial interests and the institution’s review of, and response to, such disclosures (whether or not a disclosure resulted in the institution’s determination of FCOI) and all actions under the institution’s policy or retrospective review, if applicable
• for at least three years from the date of submission of the final expenditures report or, where applicable,
• from other dates specified in 45 C.F.R. 74.53(b) and 92.42 (b) for different situations.

Application Certification
Certify in each application for funding that the institution
• Has in effect an up-to-date written and enforced administrative process to identify and manage FCOIs related to all PHS research projects
• Shall promote and enforce investigator compliance with the regulation pertaining to disclosure of SFIs
• Shall manage FCOIs and provide initial and ongoing FCOI reports to PHS/NIH
• Agrees to make information available upon request relating to any investigator disclosure of financial interest and the institution’s review of, and response to, such disclosure, whether or not the disclosure resulted in the institution’s determination of an FCOI
• Fully complies with the requirements of the regulation

Designated Institutional Official
• Designate an institutional official(s) to solicit and review disclosure statements from each investigator planning to participate in, or is participating in, PHS/NIH-funded research
• Provide guidelines to identify conflicting interests related to proposed or PHS/NIH-funded research
• The designated institutional official(s) shall develop management plans that specify the actions that have been, and shall be, taken to manage FCOIs

Inform Investigators
Must inform each Investigator of the
• regulation;
• institution’s policy on FCOI; and
• investigator’s responsibilities regarding disclosure of SFIs

Investigator Training
Institutions must require that each Investigator complete FCOI training
• Prior to engaging in research related to any NIH funded project;
• At least every four years, and
• Immediately when any of the following circumstances apply —
  • Institution revises its policy in a manner that affects the investigator;
  • When an investigator is new to the institution; or
  • When the institution finds an investigator is not in compliance with the institution’s policy or management plan

Investigator Disclosure of SFIs
• At time of Application: Require that each investigator, including subrecipient investigators, if applicable, planning to participate in PHS/NIH-funded research to disclose to the designated official(s) at time of application.
• Annually: Require each investigator, including subrecipient investigator, if applicable, to submit an updated disclosure of SFI at least annually, in accordance with the specific time period prescribed by the institution, during the period of the award.
• Within 30 days: Require each investigator, including subrecipient investigator, if applicable, who is participating in the NIH-funded research to submit an updated disclosure of SFI within thirty days of discovering or acquiring (e.g., through purchase, marriage, or inheritance) a new SFI.

Management of FCOIs
• Take necessary actions to manage FCOIs of its investigators, including those of subrecipient investigators
• Develop a management plan(s) and monitor compliance
• If an institution identifies an SFI that was not disclosed or reviewed in a timely manner, the designated official(s) shall within sixty (60) days review the SFI, determine if an FCOI exists and implement an interim management plan, if needed.

continued
### Figure 2130.1-3: Institutional Responsibilities, continued

#### FCOI Reporting
- Provide initial and ongoing FCOI reports to NIH:
  - Prior to the expenditure of funds
  - During the period of award: within 60 days of identifying a new FCOI
  - Annually
    - Report on the status of FCOI and any changes in management plan
    - Due at same time as when grantee submits annual progress report, including multi-year progress report, or at time of extension
  - All FCOI reports are submitted to NIH through the eRA Commons FCOI Module

#### Elements of an FCOI Report
- Grant number
- PD/PI or contact PD/PI
- Name of investigator with the FCOI
- Name of the entity with which the investigator has an FCOI
- Nature of FCOI (e.g., equity, consulting fees, travel reimbursement, honoraria)
- Value of the financial interest $0-4,999; $5K-9,999; $10K-19,999; amounts between $20K-$100K by increments of $20K; amounts above $100K by increments of $50K or a statement that a value cannot be readily determined
- A description how the financial interest relates to NIH-funded research and the basis for the institution’s determination that the financial interest conflicts with such research
- Key elements of the institution’s management plan

#### Subrecipient Requirements
- Incorporate as part of a written agreement terms that establish whether the FCOI policy of the awardee institution or that of the subrecipient will apply to subrecipient investigators and include time periods to meet SFI disclosure, if applicable, and FCOI reporting requirements.
- Subrecipient institutions who rely on their FCOI policy must report identified FCOIs to the awardee institution in sufficient time to allow the awardee Institution to report the FCOI to the PHS/NIH Awarding Component (i.e., to NIH through the eRA Commons FCOI Module) to meet FCOI reporting obligations.

#### Public Accessibility
Prior to expenditure of funds, make certain information concerning FCOIs held by senior/key personnel publicly accessible via a website or available within five business days of a written request.
- Update the website annually and within 60 days of identifying any new FCOIs
- Retain information for three years

### Figure 2130.1-4: Summary of FCOI Regs Noncompliance

#### FCOI Report (within 60 days)
Whenever an institution identifies an SFI that was not disclosed, identified, reviewed, or managed in a timely manner, the designated official(s) shall within 60 days review and make the determination of an FCOI and report the FCOI, if it exists, to the PHS/NIH.

#### Retrospective Review (to determine bias)
If an FCOI exists, complete and document a retrospective review within 120 days of the institution’s determination of noncompliance. Implement, on at least an interim basis, a management plan that shall specifies the actions that have been, and will be, taken to manage the FCOI going forward.

#### Update/Revise FCOI Report (following retrospective review)
If applicable, update existing FCOI report to specify the actions that have been, and will be, taken to manage the FCOI going forward.

#### Mitigation Report (promptly after retrospective review)
- If bias is found, notify NIH promptly.
- Submit Mitigation Report through FCOI Module (eRA Commons).

#### Annual FCOI
Submit annual FCOI report thereafter.
Institutional Conflict of Interest

Institutional conflict of interest (iCOI) is becoming a more popular focus of attention. In its August 2011 final rule amending its 1995 FCOI regulations for grantees and contractors, NIH said it is a significant and timely topic worthy of serious consideration, but it declined to regulate such conflicts at this time.

The Association of American Medical Colleges (AAMC) and the Association of American Universities (AAU) issued an 87-page report in February 2008 designed to assist medical schools and universities with implementing policies to manage financial conflicts of interest (www.aamc.org/jointcoireport). “Protecting Patients, Preserving Integrity, Advancing Health: Accelerating the Implementation of COI Policies in Human Subjects Research” offers the following recommendations to schools of medicine and teaching hospitals:

◆ “Accelerate the development of COI policies that cover the financial interests of faculty, institutions and their officials, including deans, department chairs, and division chiefs

◆ “Implement a reporting, evaluation and management process for both individual and institutional financial COI that includes a review system that involves a standing internal committee or an external review entity

◆ “Complete the development and implementation of institutional COI policies in the next two years.”

In 2007, the Institute of Medicine (IOM) appointed the Committee on Conflict of Interest in Medical Research, Education, and Practice to examine conflicts of interest in medicine and “to recommend steps to identify, limit, and manage conflicts of interest without negatively affecting constructive collaborations.” The report of the committee’s work, “Conflict of Interest in Medical Research, Education, and Practice,” was published in 2009. It “stresses the importance of preventing bias and mistrust rather than trying to remedy damage after it is discovered” (www.nap.edu/catalog.php?record_id=12598).

HHS OIG Weighs In. Oversight of investigators’ financial conflicts of interest is insufficient to guarantee that federally funded research is unbiased, according to a report released in January 2011 by the Office of Inspector General of the Department of Health and Human Services. Instead, the report says, NIH should require institutions to develop their own financial conflict of interest policies and disclose to NIH conflicts that do arise, along with a management plan.

This is not the first time OIG made such a recommendation; it expressed a similar sentiment in a 2009 report (OEI-03-07-00700). The agency said the presence of institutional COIs is undisputed, and organizations such as the Institute of Medicine have recommended the adoption of policies that manage them. “An institution’s financial interests (for example, royalties, equity, stockholdings, and gifts) or those of its senior officials can become institutional conflicts when the financial interests pose a risk of undue influence on decisions involving the institution’s research,” OIG said.
The report includes data on 156 institutions that responded to a survey OIG undertook; of these, 52 had reported an investigator COI to NIH and 104 had not. The survey found that “although not required for institutional financial interests, 70 of 156 responding NIH grantee institutions have written policies and procedures addressing institutional interests.”


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**Practical ‘Tools’ from FASEB**

In summer 2007, the Federation of American Societies for Experimental Biology (FASEB) launched its COI Toolkit, a Web site designed to help the scientific community better navigate financial relationships between academia and industry. The toolkit consists of three parts: Introduction, Guiding Principles, and Tools.

The guiding principles are the following:

- **Guiding Principle 1: Investigators must conduct research activities objectively.** All investigators participating in research (industry-funded or not) have a professional obligation to the integrity of their studies.

- **Guiding Principle 2: Investigators must operate with transparency.** Transparency in academia-industry relationships in research is important to advance research and promote trust of colleagues and the public.

- **Guiding Principle 3: Investigators must be accountable to all stakeholders.** Investigators are accountable to all stakeholders including the public, sponsors of research, home institutions, research teams, and human subjects and patients.

Included in the third section are tools for five specific stakeholder groups: investigators, institutions, publishers, scientific and professional societies, and industry partners.

**Link:** [http://opa.faseb.org/pages/Advocacy/coi/Toolkit.htm](http://opa.faseb.org/pages/Advocacy/coi/Toolkit.htm)
 Resources for Managing the Research Enterprise’
AIS editors

The Association of American Medical Colleges (AAMC) has assembled a collection of 13 peer-reviewed articles, previously published in its journal, Academic Medicine, on the theme of research compliance and related issues. “Management Series: Managing the Research Enterprise” pulls together material that “looks at the challenges of managing the research enterprise and addresses some of the policies and strategies implemented by medical schools and teaching hospitals to tackle these challenges.”

Topics addressed in the collection range from financial management, to the reinvention of an institutional review board, to how to manage relationships with industry sponsors. A new introduction written for the collection also is included. Articles in the collection include the following:


◆ “Promoting Translational Research in Academic Health Centers: Navigating the Roadmap,” by Timothy P. Cripe, MD, PhD, Blythe Thomson, MD, Thomas F. Boat, MD, and David A. Williams, MD

◆ “The Financial Management of Research Centers and Institutes at U.S. Medical Schools: Findings from Six Institutions,” by William T. Mallon, MD

◆ “The Benefits and Challenges of Research Centers and Institutes in Academic Medicine: Findings from Six Universities and Their Medical Schools,” by William T. Mallon, MD

◆ “A Program to Provide Regulatory Support for Investigator-Initiated Clinical Research,” by Harvey M. Arbit, PharmD, MBA, and Mark S. Paller, MD

◆ “Establishing Procedures for Institutional Oversight of Stem Cell Research,” by Patricia Zettler, Leslie E. Wolf, JD, MPH, and Bernard Lo, MD

◆ “Rejuvenating a Foundering Institutional Review Board: One Institution’s Story,” by Kenneth De Ville, JD, PhD, Gregory Hassler, JD, PhD, and Michael J. Lewis, MD, PhD

◆ “Adapting Postdoctoral Training to Interdisciplinary Science in the 21st Century: The Cancer Prevention Fellowship Program at the National Cancer Institute,” by Shine Chang, PhD, Stephen D. Hursting, PhD, RD, MPH, Susan N. Perkins, PhD, Graça M. Dores, MD, MPH, and Douglas L. Weed, MD, MPH, PhD

◆ “Creating an Infrastructure for Training in the Responsible Conduct of Research: The University of Pittsburgh’s Experience,” by Barbara E. Barnes, MD, MS, Charles P. Friedman, PhD, Jerome L. Rosenberg, PhD, Joanne Russell, RN, MPPM, Ari Beedle, MBA, and Arthur S. Levine, MD

◆ “Industry, Academia, Investigator: Managing the Relationships,” by David Korn, MD
◆ “Restoring and Preserving Trust in Biomedical Research,” by Mark Yarborough, PhD, and Richard R. Sharp, PhD


◆ “Policies of Academic Medical Centers for Disclosing Financial Conflicts of Interest to Potential Research Participants,” by Kevin P. Weinfurt, PhD, Michaela A. Dinan, Jennifer S. Allsbrook, Joëlle Y. Friedman, MPA, Mark A. Hall, JD, Kevin A. Schulman, MD, and Jeremy Sugarman, MD, MPH, MA

There is no charge for viewing the articles online at www.academicmedicine.org. Click on “Management Series” in the right-hand column.

Other collections in the series address (1) “mission-based management,” which includes a collection of nine articles from the Academic Medicine archive and (2) “strategic alliances,” featuring articles from Academic Medicine about strategic alliances and mergers in the academic medicine community.
2130.3  HIPAA Checklists*

AIS editors

The Health Insurance Portability and Accountability Act (HIPAA) and its implementing regulations govern the federal privacy and security protections for personal health information. Research organizations and researchers may or may not be covered by the HIPAA Privacy Rule. HIPAA applies only to a medical center that is a “covered entity” or “a health care provider who transmits any protected health information in electronic form.”

Sponsored programs offices may become involved with HIPAA when health care information is likely to be transmitted in the course of conducting sponsored programs and under other circumstances (see 2105.6). (For resources relating to HIPAA compliance, see Figure 5, page 2105:30.)

Starting on page 2130:10, you will find three sample HIPAA research checklists: one for research institutions (Figure 2130.3-1), one for researchers (Figure 2130.3-2), and one for covered entities (Figure 2130.3-3).

Reminder
The National Institutes of Health has a Web site that provides information on the HIPAA privacy rule for the research community. Link: http://privacyruleandresearch.nih.gov.

*These checklists are reprinted from HIPAA Patient Privacy Compliance Guide, Chapter 2000, which was originally written by Diane M.L. Lee, Esq., of the Davis Wright Tremaine Law Firm in San Francisco. They are reprinted with permission of the publisher. ©2007 Atlantic Information Services, Inc.
Figure 2130.3-1:
Checklist for Research Institutions (Sample)

1. Develop IRB policies and procedures on HIPAA requirements for all research.
   - Waiver criteria
   - Waiver approval processes
   - Waiver documentation
   - Waiver forms

2. Train IRB members in requirements and work with IRB to coordinate HIPAA and the
   HHS and FDA protection of human subjects regulations.

3. Educate investigator and research coordinators on the specific HIPAA requirements
   as they will apply to the research entity. Explain whether the research entity is a covered
   entity or not, and if a hybrid entity, how the research entity relates to those parts that
   are covered entities.

4. Review the standard HIPAA requirements, such as authorizations, minimum necessary,
   and accounting for disclosures.

5. Educate investigators and research coordinators that protocols and consents submitted
   for approval also will be required to meet HIPAA requirements.

6. Develop standard authorization language for stand-alone authorization or format for
   integration into informed consent for participation in research. A valid research
   authorization must contain the following:
   - A specific, meaningful description of the PHI that is to be used or disclosed.
   - The name or other specific identification of the persons or class of persons
     authorized to make the requested use or disclosure of the PHI.
   - The name or other specific identification of the persons or class of persons by
     whom the information may be used and/or to whom the information may be
     disclosed.
   - A description of each purpose of the requested use or disclosure.
   - An expiration date or an expiration event that relates to the individual or the
     purpose of the use or disclosure. The statement “end of the research study” or
     “none” or similar language is sufficient for research, including for the creation
     and maintenance of a research database or research repository.
   - The signature of the research subject and the date, if the authorization is signed by
     a personal representative of the research subject, a description of the
     representative’s authority to act for the research subject also must be provided.
   - The research subject’s right to revoke the Authorization in writing, any exceptions
     to the right to revoke the Authorization, a description of how to revoke the
     Authorization, and a statement that data collected prior to the revocation of
     authorization may remain in the study.
☐ A statement that any disclosure of information carries with it the potential for an unauthorized redisclosure and may not be protected.

☐ The consequences of failure to provide authorization for research-related treatment, that is, no treatment will be provided without the authorization.

7. Develop policies and procedures and guidance on HIPAA exceptions, such as use of PHI for preparatory to research and decedents. [Optional: Develop standardized forms for investigators to use for these exceptions.]

8. For research institution that is also a covered entity:

☐ Develop provider-wide ability to identify inpatients and outpatients who are participating in research.

☐ If applicable, ensure that researchers understand when they are working in the capacity of the covered entity and when they are not.

9. For research institutions that are part of a hybrid entity:

☐ Determine which parts of the hybrid entity are covered entities and which part are not.

☐ Educate researchers/investigators as to the status of the parts and the HIPAA application to each.
Figure 2130.3-2:
Checklist for Researchers (Sample)

1. Determine whether the research is subject to HIPAA.
2. Determine whether the institution that employs you is a covered entity.
3. Determine whether your research requires IRB approval and/or a waiver of both Common Rule and HIPAA authorization, or a privacy board approval/waiver only.
4. Complete necessary forms for submission to IRB/privacy board, as appropriate.
5. Obtain authorizations, if required, using a HIPAA-compliant research authorization.
7. If requesting information from an external covered entity, determine the covered entity’s procedures, and complete any forms necessary to submit to the covered entity.
8. As required, keep a log of all records used for purposes of the accounting of disclosures.

*Know which entity must receive copies of forms and representations throughout the process. Check both HIPAA office, and, if applicable, IRB instructions, as well as covered entity requirements.*
Figure 2130.3-3: Covered Entity Checklist for Release of PHI For Research Purposes (Sample)

Covered entity employees who receive a request to disclose PHI for research purposes must follow these procedures before releasing PHI to the researcher.

(1) For paper or electronic records, obtain the completed and signed form entitled “Request for Access to Protected Health Information for Research Purposes.”

(2) Forward a copy of the completed request form plus documentation to the __________ as soon as possible.

(3) Limit access to a period of time not to exceed the duration of the IRB approval for the research protocol, noted on the IRB approval letter.

Covered entity employees, who have responsibility and authority for responding to research requests, may disclose PHI for research purposes for the following circumstances after obtaining the proper documentation:

For (1), (2), and (5), a copy of the IRB approval letter must be presented by the researcher in addition to HIPAA documentation:

(1) Researcher presents:

   __ authorization signed by the patient or
   __ copy of informed consent documentation signed before April 14, 2003
   and
   __ IRB approval letter.

This covers release of all PHI described in the document.

(2) Researcher presents:

   __ IRB waiver of authorization
   and
   __ IRB approval letter.

This covers release of all PHI described in the document.

(3) For research eligibility prescreening and/or subject recruiting, prior to obtaining, the PHI researcher presents:

   __ written IRB waiver of authorization or
   __ IRB limited waiver of authorization for recruitment
   and
   __ IRB approval letter.
Figure 2130.3-3 (continued)

(4) For review preparatory to research, obtain a written statement from the researcher that states the following:

__ The researcher wants access to the PHI solely to determine whether there is sufficient data to support a specific protocol or an idea for a research study;
__ The researcher will not record any individually identifiable PHI;
__ The researcher will not remove any PHI for the records;
__ The access to the PHI is necessary for preparation for research; and
__ Patients will not be contacted using PHI obtained in this review preparatory to research.

Review preparatory to research does not include access to PHI for research subject eligibility prescreening and/or recruitment contact.

(5) For PHI on decedents, obtain a written statement from the researcher that states the following:

__ The access is requested solely for research on PHI of decedents;
__ The PHI of these decedents is necessary for the research study; and
__ Upon request, the researcher will provide documentation of the death of the individuals whose PHI is accessed and used.

Accounting of Disclosures Requirements:

Covered entity staff who disclose PHI for research purposes must maintain a written accounting of each individual disclosure as required by the covered entity accounting of disclosures policy for the following circumstances:

__ IRB waiver of authorization (less than 50 individuals).
__ IRB waiver of authorization (50 or more individuals): An individual written accounting of each disclosure does not have to be maintained; however, covered entity is required to maintain a master list of protocols for which PHI of 50 or more individuals has been accessed, including all information required with respect to such protocols as specified in the covered entity HIPAA research policy.

Accounting of disclosures is NOT required for the following circumstances:

__ release pursuant to a valid research authorization;
__ limited data sets; and
__ de-identified information.
Getting Started….

◆ Plan

  • Develop a recruitment plan during the protocol planning stage.
  • Avoid unnecessarily restrictive inclusion and exclusion criteria; think about the widest net, not the “perfect” participant.
  • Develop a profile of prospective study participants with consideration for —
    • What would motivate individuals to join the study.
    • Sources from which they obtain information.
    • Radio and television stations and programs they listen to and watch.
    • Where they live, work, shop, and play.
    • Media outlets to use for recruitment advertisements.
    • Caregivers and relatives that might serve as referral sources.
    • Community organizations (e.g., local churches, etc.) that might promote the study and encourage participation if educated about the disease/problem and the need for participation in studies.
  • Review recruitment, dropout, and screening success rates from previous studies and implement strategies that build on previous successes and incorporate lessons learned.
    • Consider assessments at locations convenient for participants.
    • Consider offering participants transportation to and from the study site.
    • Choose appropriate staff members to conduct recruitment.

◆ Budget

  • Consider costs for start-up training, advertising, staff time, and other related expenses.
  • Develop a compensation strategy for participants’ time and expenses.
  • Add costs for ongoing participant contact such as holiday and birthday cards.
  • Consider items that provide study identification – key chains, sweat shirts, pill boxes, magnets.

Once the Study Starts …

◆ **Participants Come First**
  - Contact interested candidates as soon as possible. The longer an individual waits before hearing back from study staff, the less likely it is that he or she will ultimately enroll in the study.
  - Stress the importance of compliance during the informed consent interview and throughout the study.
  - Establish rapport with the participants.
  - Remember that retention —
    - Begins with the participant’s first visit.
    - Is an ongoing process.
    - Is everyone’s responsibility.
  - Treat participants and their caregivers with respect.
  - Assure a welcoming atmosphere where participants are seen.
  - Be considerate of the participant’s time.
  - Identify and resolve issues in a timely manner.

◆ **Use the Referral Sources**
  - Network with clinic staff not working on the study.
  - Network with other local health care providers.
  - Send direct mailings to selected health care providers.
  - Give presentations about the study for clinic staff and provide periodic updates on the study’s progress.
  - Participate in health fairs, speaking engagements, support groups, television and radio interviews, and other forums.
  - Ask for public service announcements on radio and television.

◆ **Track Progress**
  - Track the number of participants enrolled against expected per site.
  - Monitor recruitment and intervene quickly to change recruitment techniques that are proving unsuccessful.
  - Identify barriers to recruitment.
  - Do not stop at one strategy; incorporate all that work for the study.

◆ **Implement Retention Strategies**
  - Consider modifying the MOP to streamline assessments and procedures that are excessively burdensome and time consuming.
  - Use regular teleconferences with project staff at study sites to “brainstorm” on retention strategies.
  - Send reminder notes to let the participant know you will be calling shortly for their next assessment.
• Be persistent. Document all attempts to contact participants, and keep trying.
• Ensure that all of these efforts preserve the privacy of the participant.
• Use the contact information for a missing participant that has not withdrawn consent. The telephone numbers for friends and/or relatives in the contact log should be accessed to locate the participant. If the participant has given consent for home visits, visit the participant’s home.
• Use public information to try to locate the participant. For example, in some states, the motor vehicle administration and other government agencies will release an individual’s contact information if it is considered to be part of the public record.
§2130.5 Informed Consent Checklist*
National Institute on Aging

(Note: Please refer to DHS HHS OHRP 45 CFR 46 §46.116 for details concerning the regulations.)

<table>
<thead>
<tr>
<th>Basic Elements</th>
<th>Indicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A statement that the study involves research</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>An explanation of the purposes of the research</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>The expected duration of the individual’s participation</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A description of the procedures to be followed</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>Identification of any procedures which are experimental</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A description of any reasonably foreseeable risks or discomforts to the participant</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A description of any benefits to the participant or to others which may reasonably be expected from the research</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A disclosure of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to the participant</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A statement describing the extent, if any, to which confidentiality of records identifying the participant will be maintained</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>For research involving more than minimal risk, an explanation as to whether any compensation, and an explanation as to whether any medical treatments are available, if injury occurs and, if so, what they consist of, or where further information may be obtained</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>An explanation of whom to contact for answers to pertinent questions about the research and participant’s rights, and whom to contact in the event of a research-related injury to the participant</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A statement that participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the individual is otherwise entitled, and the individual may discontinue participation at any time without penalty or loss of benefits, to which he/she is otherwise entitled</td>
<td>❑ ❑</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Additional Elements, as appropriate</th>
<th>Indicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>A statement that the intervention may involve risks to the individual (or to the embryo or fetus, if the individual is or may become pregnant), which are currently unforeseeable</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>Anticipated circumstances under which the individual’s participation may be terminated by the investigator without regard to the subject’s consent</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>Any additional costs to the individual that may result from participation in the research</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>The consequences of an individual’s decision to withdraw from the research and procedures for orderly termination of participation by the individual</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>A statement that significant new findings developed during the course of the research, which may relate to the individual’s willingness to continue participation, will be provided to the individual</td>
<td>❑ ❑</td>
</tr>
<tr>
<td>The approximate number of study participants</td>
<td>❑ ❑</td>
</tr>
</tbody>
</table>

Included in the American Recovery and Reinvestment Act was the HITECH act, which beefed up both the security and privacy rules governing protected health information. With enforcement of the security breach notification rule under the HITECH Act now in effect, covered entities should have in place a plan for dealing with possible breaches of security involving protected health information (PHI). In reviewing your plan as a covered entity, be sure to consider the possible “pitfalls” as outlined in the following chart that could lead to security breaches.

<table>
<thead>
<tr>
<th>Technology</th>
<th>Risks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellphones/Smarphones</td>
<td>• Staff/patients taking pictures/video without authorization</td>
</tr>
<tr>
<td></td>
<td>• Text message or e-mail with PHI sent unencrypted, over unsecured network</td>
</tr>
<tr>
<td>Voicemail/phone messages</td>
<td>• Message received by family member unaware of the patient’s condition</td>
</tr>
<tr>
<td></td>
<td>• PHI left at wrong number</td>
</tr>
<tr>
<td>Fax machines</td>
<td>• Documents with PHI faxed to the wrong number</td>
</tr>
<tr>
<td></td>
<td>• Wrong person in the office picks up the fax</td>
</tr>
<tr>
<td></td>
<td>• No cover sheet</td>
</tr>
<tr>
<td>Computers/Laptops</td>
<td>• Theft of computer holding PHI</td>
</tr>
<tr>
<td></td>
<td>• Failure to encrypt</td>
</tr>
<tr>
<td></td>
<td>• Use of unsecured Web connection to send PHI, information is intercepted</td>
</tr>
<tr>
<td></td>
<td>• PHI exposed on publicly accessible Web site</td>
</tr>
<tr>
<td></td>
<td>• Information on hard drive not properly disposed of</td>
</tr>
<tr>
<td></td>
<td>• Virtual private network (VPN) accessed without secure connection</td>
</tr>
<tr>
<td></td>
<td>• Computer is hacked, PHI copied and stolen</td>
</tr>
<tr>
<td>Facebook</td>
<td>• Statuses/wall posts document what happened at the hospital, violate patient privacy</td>
</tr>
<tr>
<td></td>
<td>• Pictures of patients/doctors posted</td>
</tr>
<tr>
<td>Blogs</td>
<td>• PHI or patient identity disclosed in an entry</td>
</tr>
<tr>
<td>E-mail</td>
<td>• Sender/recipient not authenticated</td>
</tr>
<tr>
<td></td>
<td>• Failure to encrypt</td>
</tr>
<tr>
<td></td>
<td>• Hacker intercepts</td>
</tr>
<tr>
<td></td>
<td>• Unsecured connection</td>
</tr>
<tr>
<td></td>
<td>• Unintended recipient opens or sees PHI</td>
</tr>
<tr>
<td></td>
<td>• Message sent to the wrong address</td>
</tr>
<tr>
<td></td>
<td>• Employees tricked into exposing usernames/passwords through phishing scams</td>
</tr>
<tr>
<td>Thumbdrives</td>
<td>• Failure to encrypt</td>
</tr>
<tr>
<td></td>
<td>• Lost or stolen, PHI disclosed</td>
</tr>
<tr>
<td>Backup tapes/CDs</td>
<td>• Failure to encrypt</td>
</tr>
<tr>
<td></td>
<td>• Lost or stolen, PHI disclosed</td>
</tr>
<tr>
<td>Medical devices (e.g.,</td>
<td>• PHI from previous patient viewed by current patient</td>
</tr>
<tr>
<td>radiation equipment, scanners)</td>
<td></td>
</tr>
</tbody>
</table>

Source: This chart is reprinted from the March 2010 issue of Report on Patient Privacy, published by Atlantic Information Services, Inc. www.AISHealth.com
\[2160\] **Statistics and Survey Results**

This section includes statistics and survey results from reputable sources relating to sponsored research administration at academic medical centers.

\[2160.1\] **Trends in NIH Sponsored Funding to Medical Schools**

AIS editors

The National Institute of Health (NIH) provides the bulk of federal funding for biomedical research to U.S. institutions of higher education, and biomedical-related research is the bulk of NIH external or extramural funding. The NIH Office of Extramural Research makes available a variety of statistical information relating to its awards and funding trends to medical schools and other institutions at http://report.nih.gov/index.aspx.

In light of the fairly recent trend for NIH’s budget to remain relatively flat, it may be particularly useful to take a snapshot look at the trend in NIH funding to medical schools (see Figure 2160.1-1). Another helpful chart shows the NIH research project success rate for medical schools by individual departments for the most current fiscal year (see Figure 2160.1-2). (Some historical success rate data for medical schools is available at the site referenced above.)

**Ranking Tables**

Although NIH routinely has generated annual “comparative ranking tables on its medical research funding” (see Figures 2160.1-3), the agency will no longer be doing so. Instead, NIH has developed a Web-based tool to help an institution determine funding awarded to any one organization or department. According to NIH, “The tool will also allow you to download aggregate data, on a per fiscal year basis, so that you can conduct your own analysis.” This Web-based tool and organization data is available at http://report.nih.gov/index.aspx.

NIH is making this change in part as a result of responses received from the grantee community that suggested that the current ranking tables were not necessary and because of the establishment of multiple investigator awards, which “makes the total dollar amounts of funds received by individual departments impractical.” (For a discussion of multiple PI awards, see ¶2520.1.)

Some historical data is still provided for medical schools (for FYs 1996 through 2005) at the Web site referenced above.
Figure 2160.1-1: NIH Support to U.S. Medical Schools, FYs 1970–2005

### Figure 2160.1-2: NIH Research Project Applications Success Rate* for Medical Schools by Department, FY 2007

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<thead>
<tr>
<th>DEPARTMENT NAME</th>
<th>NUMBER REVIEWED</th>
<th>NUMBER AWARDED</th>
<th>SUCCESS RATE</th>
</tr>
</thead>
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<td>ADMINISTRATION</td>
<td>10</td>
<td>1</td>
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<tr>
<td>ANATOMY/CELL BIOLOGY</td>
<td>937</td>
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<tr>
<td>ANESTHESIOLOGY</td>
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<tr>
<td>BIOCHEMISTRY</td>
<td>1377</td>
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<td>23.9%</td>
</tr>
<tr>
<td>BIOLOGY</td>
<td>230</td>
<td>67</td>
<td>29.1%</td>
</tr>
<tr>
<td>BIOMEDICAL ENGINEERING</td>
<td>64</td>
<td>9</td>
<td>14.1%</td>
</tr>
<tr>
<td>BIOPHYSICS</td>
<td>22</td>
<td>5</td>
<td>22.7%</td>
</tr>
<tr>
<td>BIOSTATISTICS &amp; OTHER MATH SCIENCE</td>
<td>81</td>
<td>21</td>
<td>25.9%</td>
</tr>
<tr>
<td>DENTISTRY</td>
<td>11</td>
<td>1</td>
<td>9.1%</td>
</tr>
<tr>
<td>DERMATOLOGY</td>
<td>163</td>
<td>35</td>
<td>21.5%</td>
</tr>
<tr>
<td>EMERGENCY MEDICINE</td>
<td>53</td>
<td>10</td>
<td>18.9%</td>
</tr>
<tr>
<td>ENGINEERING (ALL TYPES)</td>
<td>11</td>
<td>3</td>
<td>27.3%</td>
</tr>
<tr>
<td>FAMILY MEDICINE</td>
<td>168</td>
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<tr>
<td>GENETICS</td>
<td>623</td>
<td>190</td>
<td>30.5%</td>
</tr>
<tr>
<td>INTERNAL MEDICINE/MEDICINE</td>
<td>5020</td>
<td>1,070</td>
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<tr>
<td>MICROBIOLOGY/IMMUN/VIROLOGY</td>
<td>1374</td>
<td>332</td>
<td>24.2%</td>
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<td>NEUROLOGY</td>
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<td>146</td>
<td>19.5%</td>
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<td>479</td>
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<td>OBSTETRICS &amp; GYNECOLOGY</td>
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<td>PEDIATRICS</td>
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<td>18.9%</td>
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<td>PHARMACOLOGY</td>
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<td>20.3%</td>
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<td>13</td>
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<td>23.1%</td>
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<tr>
<td>PHYSIOLOGY</td>
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<tr>
<td>PSYCHIATRY</td>
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<td>PSYCHOLOGY</td>
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<tr>
<td>PUBLIC HEALTH &amp; PREV MEDICINE</td>
<td>471</td>
<td>85</td>
<td>18.0%</td>
</tr>
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</table>

* Success rates indicate the percentage of reviewed “research project grant” (RPG) applications that receive funding. This is computed on a fiscal year basis. Dividing the number of competing applications funded by the total number of competing applications reviewed determines success rates. Applications that have one or more amendments in the same fiscal year are only counted once.
Figure 2160.1-2 (continued)

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<th>Field</th>
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<td>SOCIAL SCIENCES</td>
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<td>VETERINARY SCIENCES</td>
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<tr>
<td><strong>GRAND TOTAL</strong></td>
<td><strong>22,981</strong></td>
<td><strong>5,162</strong></td>
<td><strong>22.5%</strong></td>
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### Figure 2160.1-3: NIH Awards to Medical Schools by Rank, FY 2005

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<th>Rank</th>
<th>Medical School</th>
<th>Total Awards</th>
<th>Research Grants</th>
<th>Training Grants</th>
<th>Fellowships</th>
<th>Other Awards</th>
<th>R&amp;D Contracts</th>
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<td>1</td>
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<td>$449,354,324</td>
<td>$394,194,692</td>
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<td>$710,072</td>
<td>$32,760,726</td>
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<td>UNIV OF PENNSYLVANIA SCH OF MEDICINE</td>
<td>924</td>
<td>810</td>
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<td>UNIV OF CALIF SAN FRAN SCH OF MED</td>
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<td>DUKE UNIVERSITY SCH OF MEDICINE</td>
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<td>590</td>
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<td>UNIVERSITY OF WASHINGTON SCH OF MEDICINE</td>
<td>682</td>
<td>586</td>
<td>42</td>
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<td>$267,504,838</td>
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<td>DAVID GEFFEN SCH OF MED AT UCLA</td>
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<td>YALE UNIVERSITY SCH OF MEDICINE</td>
<td>749</td>
<td>647</td>
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<td>UNIV OF PITTSBURGH SCH OF MEDICINE</td>
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<td>664</td>
<td>32</td>
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<td>$287,527,728</td>
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<td>UNIVERSITY OF MICHIGAN MEDICAL SCHOOL</td>
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<td>577</td>
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<td>14</td>
<td>COLUMBIA U COL OF PHYSICIANS &amp; SURGEONS</td>
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</table>

Note: The total cost given in the tables above is the sum of the direct and indirect costs for each fiscal year, and not for the life of the project. These tables do not include schools of dentistry.
<table>
<thead>
<tr>
<th>Rank</th>
<th>Institution</th>
<th>NIH Awards FY 2005</th>
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<td>32 $8,691,038</td>
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<td>36 $1,322,847</td>
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<td>1 $641,970</td>
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<td>18 $5,249,456</td>
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<td>26 $1,066,039</td>
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<td>351 $152,010,610</td>
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<td>23 $10,490,607</td>
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Figure 2160.1-3: NIH Awards to Medical Schools by Rank, FY 2005 (continued)

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October 2006
Sponsored Research Administration
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**Figure 2160.1-3: NIH Awards to Medical Schools by Rank, FY 2005 (continued)**

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continued
Figure 2160.1-3: NIH Awards to Medical Schools by Rank, FY 2005 (continued)

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Knowledge Check

AIS editors

The Q&As at ¶2190.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 2100 has been understood. *Note:* For the answer key for ¶2190.1, see ¶2190.3, which appears on a separate page (page 2190:5) for testing purposes.

Discussion topics at ¶2190.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶2190.1 Q&As

1. One of the primary jobs of the university’s Institutional Review Board is to
   (a) Sign and approve federal contracts on behalf of an institution
   (b) Review and approve initially and periodically research involving human subjects
   (c) Approve compensation for principal investigators involved in clinical trials
   (d) Issue policies and procedures with respect to accounting for clinical trials

2. The following principles were defined in the Belmont Report as basic to the protection of human subjects EXCEPT:
   (a) Compensation
   (b) Respect for persons
   (c) Beneficence
   (d) Justice

3. An IRB and OSP often work together when an institution is applying for accreditation from the
   (a) Federal Demonstration Partnership
   (b) Association for the Accreditation of Human Research Protection Programs
   (c) Office of Research Integrity
   (d) Office for Human Research Protections Program

4. An academic medical center is said to have a traditional “tripartite” mission as follows:
   (a) Education, patient care, research
   (b) Effort reporting, cost sharing, closeout
(c) Forms completion, application submittal, acceptance
(d) See no evil, hear no evil, speak no evil

5. Under HIPAA, PHI stands for
(a) Private health information
(b) Protected hereditary information
(c) Protected health information
(d) Principal health information

6. Limited data sets may be used for all of the following EXCEPT
(a) Telemarketing health care options to clinical trial participants
(b) Research purposes
(c) Public health
(d) Health care operations

7. An AMC may have a relationship with which of the following federal agencies that operates hospitals and clinics
(a) National Science Foundation
(b) National Cancer Institute
(c) Institute of Medicine
(d) Veterans Affairs

8. It is not uncommon for medical centers to establish offices of “corporate alliances” or “corporate relations” in order to
(a) Facilitate collaborations between university researchers and corporate scientists
(b) Satisfy an NIH award requirement
(c) Comply with a VA contract requirement
(d) Construct appropriate material transfer agreements
1. The risks of inadequate administration of sponsored programs in a medical school are great. What are the primary sources of these risks and what is the role of the sponsored research office in mitigating such risks?

2. Working with the Department of Veterans Affairs (formerly the Veterans Administration) presents unique issues for AMCs. Do you agree or disagree with this statement, and explain your answer.

3. What are the considerations involved in obtaining accreditation for your human subjects protection programs?

4. The issues concerning effort reporting and clinical trials are often complex. How is this so, and how can an OSP help investigators best comply with these confusing requirements?
¶2190.3 **Answer Key**

Following are the correct answers to the questions included at ¶2190.1.

1. (b) Review and approve initially and periodically research involving human subjects
2. (a) Compensation
3. (b) Association for the Accreditation of Human Research Protection Programs
4. (a) Education, patient care, research
5. (c) Protected health information
6. (a) Telemarketing health care options to clinical trial participants
7. (d) Veterans Affairs
8. (a) Facilitate collaborations between university researchers and corporate scientists
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- 2360 Statistics and Survey Results
- 2390 Knowledge Check

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¶ 2300
Special Issues for
Predominantly Undergraduate
Institutions
Chapter 2300
Special Issues for Predominantly Undergraduate Institutions

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Richard Seligman, Ed.D., Associate Vice President for Research Administration,
California Institute of Technology

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Milton T. Cole, Ph.D., Assistant Vice President of Academic Affairs, Villanova University

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§2305.2 Institutional ‘Cultural’ Challenges
§2305.3 Resource Challenges
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Q&As
Discussion Topics
Answer Key
Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter addresses special challenges for the research administrator in managing the research enterprise at predominantly undergraduate institutions (PUIs).

Milton Cole of Villanova University, at ¶2305, offers a thorough analysis of the cultural, resource allocation, and reward structure of the predominantly undergraduate institution (PUI). Cole’s chapter contains a thoughtful discussion of what makes PUIs different from research universities, particularly with regard to their approaches to seeking and carrying out sponsored research projects. Cole also provides a complete presentation of “faculty development” and the incentive programs that PUIs may offer to encourage faculty participation in sponsored programs.

Cole’s chapter includes a discussion of the role of the office of sponsored programs at the PUI and how that role may differ from the role of similar offices at research universities. For many research administrators, the institutional model toward which one strives is best represented by the research-intensive university where considerable value, and pressure, are placed on the ability of faculty members to successfully compete for grants and contracts. Cole provides the reader with a clear understanding that this is definitely not the case at the PUI and goes on to explain why.

Research administrators who want to be successful at PUIs, as well as research administrators who work with PUIs, need to “know the territory” and Cole’s chapter provides an excellent map of the field.

This chapter will continue to respond to the information needs of research administrators over time through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶2305, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at ¶2320), practical tools (at ¶2330), case studies (at ¶2340), and statistics and survey results (at ¶2360). A “knowledge check” containing Q&As and discussion topics is included at ¶2390.
Special Issues for Predominantly Undergraduate Institutions
Milton T. Cole, Ph.D.
Assistant Vice President of Academic Affairs
Villanova University

Predominantly undergraduate institutions (PUIs) are institutions that generally emphasize instruction over research and concentrate resources on undergraduate versus graduate programs. They are by primary focus, culture, and resource allocation very different from research universities or research-intensive universities.

This chapter identifies significant distinctions between “research” and “instructional” (predominantly undergraduate) institutions as a valuable exercise in understanding the nature of PUIs and to highlight some of the challenges facing an office of sponsored programs (OSP) at a PUI. It is important to note, however, that research universities, as comprehensive institutions, essentially set the accepted standard toward which all universities strive.

This chapter also discusses the use of institutional resources and incentives and the role and staffing of the OSP at PUIs, and it provides an overview of sources of funding.

Focus on Undergraduate Instruction

Predominantly undergraduate institutions are not sufficiently understood if looked at based only on size. Although many PUIs are “small” institutions in terms of number of students, this characteristic does not necessarily apply to all PUIs, nor does it accurately explain them. With regard to physical size, there are land grant state colleges and universities that have vast campuses and several thousand students, yet are classified as PUIs.

The most accurate way of fully understanding the “predominantly undergraduate” institution is to focus on the importance the institution places on instruction and the size of its graduate school. The faculty at the PUI mostly is composed of individuals who have determined that student instruction is a better fit for them than a career built upon and evaluated by an information-production standard. Accordingly institutions that hire this type of faculty have a commitment to instruction.

Because the majority of graduate degrees, even at the master’s level, involve some element of new information generation, PUIs, with their emphasis on instruction, generally target undergraduates. PUIs range from small, liberal arts institutions with fewer than one thousand students to large state universities that offer some master’s programs but emphasize, and hire faculty based upon, the pre-eminence of undergraduate instruction.

1 Among the many discussions of graduate education and scholarship, including how institutional size factors in, this work by Ernest Boyer is one of the clearest explications. See Ernest L. Boyer, Scholarship Reconsidered: Priorities of the Professoriate, San Francisco, CA, Jossey-Bass Publishers, 1990.
The preponderance of research at the collegiate level takes place in graduate schools where the imperative is to produce new insights, data, and understandings, which form the basis of master’s theses and doctoral dissertations. Institutions with a declared purpose of producing this level of information focus not only on providing a fundamental education within a field but also on the production and dissemination of new information in the field. This is the important strategic difference between predominantly undergraduate institutions and graduate institutions.²

Bear in mind that a fundamental measure of the quality of colleges and universities of any description is its faculty. And the metrics (measures) for evaluating faculty per se are heavily weighted toward faculty members with impressive publication and funding histories.

12305.2 Institutional ‘Cultural’ Challenges

PUIs and graduate institutions have different world views or institutional cultures. “Institutional culture,” with regards to colleges and universities, can be defined as the way in which an organization in the business of higher education carries out its mission and defines its goals. A graduate research institution defines its purpose and evaluates its success by using indices of research and the concomitant production of new knowledge. Such an institution to be successful requires a faculty that is involved in state-of-the-art research and must commit the resources necessary to attract and retain such faculty members.

A graduate research institution must recruit students who want to initiate careers in research by working with active, leading researchers. Because there are a limited number of research positions which these research-motivated students can hold, the faculty and universities that enroll these students are able to be highly selective in choosing students and comparatively generous in the “packages” which they can offer them. The package usually includes, but is not necessarily limited to, reasonable stipend, tuition payment or waiver, laboratory assignment, and housing. The teaming of active research faculty and carefully selected, highly motivated graduate students is an essential part of the fundamental prescription for research success.

Contrast this with the institutional culture more often found at the PUI. The faculty at the PUI is composed mostly of individuals who have determined that student instruction is a better fit for them than a career built upon and evaluated by an information production standard. Therefore they chose to establish their careers at instruction-focused institutions, where research may be well thought of but not stridently encouraged.

²The Carnegie Foundation makes distinctions between types of universities that can be particularly illustrative of this point. See www.carnegiefoundation.org/classifications/index.asp.
**Graduate Programs**

Master’s level programs at PUIs are designed for students to extend their undergraduate degrees in subject areas significant to the local job market and economy. This is one of the reasons that education and business programs are the most successful master’s level programs at predominantly undergraduate institutions. It would appear that few individuals enter graduate level courses at a PUI to pursue terminal degrees because the great majority of doctorates are received at institutions at which the degree recipient also received his or her master’s degree.

Faculty members who have completed successfully a doctoral program also create dissertations. A dissertation is an original work of scholarship developed to earn a terminal degree. While those new Ph.D.s who primarily want to continue the scholarly pursuit gravitate toward post-doctorate and/or junior faculty positions at institutions defined by their scholarly output, someone who is not so driven pursues a situation where there is a less-intense demand for scholarship. Smaller institutions are historically defined by their interest in instruction and, for the most part, the publication and grants and contracts histories of their faculties reflect more dedication to classroom activities than scholarly pursuits. This, of course, is most clearly the case in the natural and physical science(s) and engineering fields where significant investment in laboratories is often required to be competitive in the scientific research arena.

**Teaching and Service**

Differences in institutional cultures between PUIs and research institutions are also reflected in the nonresearch-related obligations that fall to the faculty of each institutional type. To state the obvious, more class time is required of instruction-focused faculty than of research-focused faculty.

Service can mean many things depending upon the institution. Therefore, serving on faculty and university committees, volunteering for local charitable events, participation in mission trips, responsible positions in organizations unrelated to academic discipline, or all the above can be evidence of service that universities expect of their faculty. The role of service is usually greater at smaller institutions and, in some cases, it appears to be as important as scholarship.

**Tenure Policies**

Perhaps the most illustrative evidence of the cultural differences between instruction-intensive and research-intensive institutions is the research incentives built into tenure and promotion guidelines. Review an institution’s promotion and tenure policies and one will get a clear idea of the weight given to the quantity and quality of publications, service as an officer of a professional organization, and the receipt of awards for professional and scholarly performance or service. From such a review, a picture will emerge

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3 A perusal of the mission statement of any small college will indicate the importance of instruction and encouragement of research. Research activity, however, is never to be confused with the dominant role of instruction at the PUI. The university where the author is employed is representative of the category. See for example: www.heritage.villanova.edu/.
as to what attributes of an academic career are most valued by the institution. No reasonable university official criticizes sponsored research activity per se but many institutions categorize organized research activity as peripheral to the primary instructional focus of the institution and many of these institutions are PUIs.

There is also a more personal dimension to the application and administration of promotion and tenure policies at PUIs. Members of the typical promotion and tenure committee are tasked to apply the institution’s standards, yet, as human beings, each member has his or her own academic career as a model of the faculty standard. It often appears, therefore, that the manner in which the committee members are chosen can greatly influence the weight accorded scholarship (e.g., grants and publications) standards in promotion decisions.4

Tenured faculty with modest research experience may not see research as being a critical quality in their recommendation of a colleague for promotion. When sitting on a tenure committee, such faculty may emphasize instructional, collegial, and service activities rather than scholarly achievements such as grant awards and numerous publications in tenure deliberations. In making tenure recommendations based on such criteria, these faculty are, in a manner of speaking, defending their careers. It may be necessary to remind deans and provosts from time to time that if they are sincere about increasing scholarly activity, the most important factor is recruitment. It is easier to hire researchers than to create them.

**Grant Award**

For most researchers and sponsored projects personnel at larger research universities, the awarding of a grant is a financial process that enables a particular “statement of work” to be performed, which furthers the creation of new knowledge. At the smaller, instruction-focused institution, a grant award is just that — an award. The implication here is that in receiving a grant, the efforts of the principal investigator (PI) at a PUI are being trumpeted for crafting a proposal with a commendable level of analytic or evaluative potential. In other words, at a PUI the singular grant award often is thought of as a lasting career milestone and not simply one of many stones to tread in developing an illustrious research career, which is the common perspective at research institutions.5

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4Service activities of faculty members at smaller institutions are often equally as valued as research, yet subordinate to teaching. Senior faculty who do not have a research history are often among the longest-serving members of various institutional committees, including the influential tenure and promotion committees.

5The discussion of smaller institution culture is very important when attempting to view PUIs through the lens of research. Accordingly the most interesting articles about dramatic improvements in research activities come from smaller institutions. See for example: Barbara Mulligan, “A Research Renaissance: Faculty Research Funding Successes Benefit Students and Bolster Reputation,” Lafayette Magazine, Fall 2003 and NSF-AIRE@Reed (www.reed.edu/nsfaire/science.html).
Resource Challenges
In institutions where instruction is the primary goal, it is anticipated that the academic officers of these institutions would provide support and encouragement for instruction. While research at such institutions is seen as positive, it is the research that involves the smallest institutional investment in time and other resources that is most appreciated.

Faculty Time
Some observers suggest that smaller schools that desire a greater involvement in research would be wise to reconsider such ambitions. The admonition is based upon the argument that the costs of doing research are never adequately recovered. While research administrators acknowledge that F&A (facilities and administrative or indirect) costs are never completely reimbursed, universities too often overlook that the costs of preparing proposals is forever lost. It is a common occurrence for only 25 percent of an institution’s proposals to be accepted for funding. This means that thousands of hours of faculty time required to develop the rejected proposals has to be covered by the university, and institutions continue to submit proposals at an ever-increasing rate. It is the costs in faculty time that may be the greatest burden on a PUI seeking to obtain sponsored research funds.

Uncommitted faculty time is scarce at the PUI. Time and all other costs associated with research activity are a crucial part of the appeal of research. If faculty members are to be evaluated on the basis of their research activity, they want to be assured that resources will be available for that activity, including proper laboratories, graduate students, supplies and materials, and, perhaps most importantly, the time to perform experiments, analyze data, and write reports, proposals, and articles.

At a PUI the costs of instruction are offset by the tuition and fees paid by students for this type of service. All of the revenue aspects of research are more difficult to specifically enumerate without showing a possibility of higher costs than revenue, hence a deficit. In other words, since a PUI doesn’t have significant money flowing into the institution from grant and contract activity, it is relying upon tuition as the primary source of revenue.

The PUI justifies the tuition on the basis of the educational services being provided to the student. Therefore, at teaching institutions, the amount of tuition charged must be specifically attributable to the quality and costs of the instruction being provided because that instruction is the primary product.

The most productive research faculty can command the highest salaries, may require expensive laboratories, and may need frequent support from university administrative personnel (i.e., from the OSP and/or financial accounting office) all of which cannot be fully paid for from sponsored awards. Competition among elite research universities for leading scholars in certain fields continually escalates the costs of hiring and retaining outstanding researchers. Facilities and state-of-the-art laboratories are expensive to establish and maintain. Hiring staff to stay on top of sponsored research compliance requirements — which are always increasing — also is costly.

The PUI rarely becomes involved in such contests; instead it must look for faculty members who fit the PUI profile yet who have the potential to achieve some research
distinction. Just as the faculty must primarily concentrate on instruction while pursuing an occasional commitment to a research project, facilities at the PUI often must primarily support instruction and serve double duty as part-time research labs.

**Award Budgets**

The division of a calendar year on the typical grant’s budget also underscores the importance of time as a resource. Few sponsored projects involving basic research take place solely within the academic year. This, however, is the impression that might be drawn from an analysis of a standard budget that has separate columns for academic and calendar years. This type of budget form provides for an academic year concentration on instruction with “summer months” available for research. This form also allows for the fact that research conducted on a 12-month basis may be restricted to the form of summer salaries for research faculty. The use of a “calendar year” category could be most appropriate for research universities while the “summer months” category is a better fit for PUI culture.6

If a faculty member is at an institution that pays him for 100 percent of his activity for the academic year, then he is paid by the institution for all of his time during that academic year, which usually runs nine or ten months. If this is the case, when can the faculty member perform any additional activities? The summer months, therefore, become the period in which a researcher may be paid for additional activity (in this instance research) if he is paid for all of his time for the rest of the year. The budget structure dictates this distribution of time because, in fact, it is rare if not impossible for quality research to be performed only during a predetermined time frame.

Most research universities estimate the amount of time that research personnel will spend on a project and distribute that time proportionately throughout the budget year. For example, if Dr. X were working for the equivalent of two months during a budget year he would be paid two-twelfths per month throughout the budget year. At PUIs, he would be paid from the grant only during the months that he was not paid his other salary, so that there would be no conflict as to when he had available time to perform research activities.

**Release Time**

When a sponsor pays to replace a faculty member “released” from the classroom in order to do research, this is known as requesting “release time.” Release time is an unpopular idea with many sponsors, yet it is often of critical importance in order for a PUI researcher to receive institutional permission to commit to a research project. Without this salary supplement in a research budget, the PUI would have to use its own funds to cover the instructional responsibilities of the absent faculty. If a teaching load is determined with the expectation that at least one-quarter to one-half of a

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researcher’s time will be involved with sponsored research activity, then that teaching load is prepared with research in mind. Where research comes as an exception to the normal teaching load, then provisions must be made to cover courses that would normally be a part of the now-modified load. This marks a difference between research institutions and PUIs.

Those faculty members teaching “full loads,” however defined by the institution, who do not seek release time could be seen by some to be either shortchanging their instructional obligations or shortchanging the proposed research work by trying to add significant responsibilities to an already full (teaching) schedule. The legitimacy of effort reporting (the detailed distribution of a faculty member’s time as outlined in a proposal) may also be damaged by simply adding to the fully committed “100 percent” of activity. Release time funds are, by definition, a salary supplement to enable the researcher’s institution to hire a qualified person to teach a course for the sponsored investigator who will be using that portion of his instructional time for research. Therefore, extra salary is requested to pay someone to teach for the funded investigator.

The issue of release time sparks much debate within smaller institutions and some criticism directed at sponsors who are unwilling to understand the PUI predicament. For the most part, sponsors who do not understand or accept the need for “release time” funds at smaller institutions are requiring certain institutions to cost share or simply discouraging those institutions from applying for these sponsors’ research funding.

**Cost Sharing**

The problematic concept of cost sharing presents special burdens for the PUI. “Cost sharing” is the cost of a project not borne by the sponsor. A sponsor may require an institution to contribute to the cost of a research project, or the institution may choose to offer to share a portion of the project costs to make its research proposal more attractive to the sponsor.

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**Research Time Commitment**

The federal government under A-21 allows institutions of higher learning to estimate the amount of time that must be committed to research on sponsored projects. This time becomes a part of the total effort of the researcher, and all time commitments aggregated must equal 100 percent of the researcher’s time for all research and nonresearch activities. If 25 percent of one’s time is being committed to research, 60 percent to teaching, and 15 percent to service, what happens if another research grant representing a 15 percent commitment of the researcher’s time is received? Some would say that if the faculty member worked on the grant after his classes and on weekends then perhaps he could equal the same total hour commitment as his service involvement. The problem with this approach is that what was once 100 percent of the faculty member’s time has now, due to convenience, become 115 percent of his time. Any attempt to modify the definition of 100 percent for convenience damages the integrity of the personnel obligation on grant/contract budgets and violates OMB circulars that determine the methods used to determine costs in grant and contract activity.
A small grant to support a research visit to a library with exclusive holdings exacts a much smaller contribution from the institution than would a commitment to contribute a significant percentage to an expensive piece of laboratory equipment purchased under an award. Even if the equipment support is provided, the procuring faculty member must first and foremost demonstrate its value as an instructional tool to make an argument for a larger institutional benefit if institutional cost sharing is required. This practice frequently has resulted in the PUI being unable to apply for awards that have cost sharing requirements.

Complying with Federal Requirements

A substantial cost for all institutions seeking government research funding can be summed up by the ominous term — compliance. To simplify, compliance means that a specific practice is required by a sponsor, usually federal, to ensure that its standards are fully met. There are compliance requirements covering the entire spectrum of university research activities ranging from financial reporting, to the purchase and distribution of equipment, and to the use and protection of research subjects, all of which require rigorous attention.

Problems arise when compliance requirements necessitate hiring additional staff to monitor compliance or the installation of expensive systems without providing appropriate avenues for recovery of these costs. For example, a faculty member seeking to conduct research into immunological reactions may think that acquiring a colony of rats and outfitting the necessary environment in which to study them is rather simple to cost out. A closer look at the budget will find that in addition to possibly needing assistance from someone who knows the federal requirements regarding animal protections — depending upon the type of rats or the particular type of immunological response under study — the temperature controls in the facility might have to be independent from the facility’s other ventilation systems, the light and temperature in the lab may have to be monitored 24 hours a day, special feed may be necessary, inoculations and special clothing may be required for laboratory personnel, and the list goes on.

What appeared at first to be a simple equipment and animal procurement, could require thousands of dollars in initial costs and thousands more for regular maintenance and monitoring throughout the life of the project. This causes difficulties for all categories of institutions, but especially for the PUI.

Using Faculty Inducements or Incentives

Is the motivation to write research proposals a major issue at most large universities? The answer, for the most part, is “No” because the culture of research is well established and spelled out, for example, in faculty handbooks and promotion and tenure policies. Many prominent universities, however, do have “incentives” for research activity but those incentives are directed more at identifying exceptional or outstanding

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research work rather than simply generating proposals. Because efforts by PUIs to increase sponsored research are somewhat limited by an institutional culture that does not strongly emphasize the role of research, OSPs at such institutions emphasize faculty incentives available for proposal preparation.

**Types of Incentives**

Incentive schemes can be baldly monetary — such as an institution awarding bonuses to or increasing the travel budget for faculty members who generate proposals. Or they can be idealistic and ego-boosting — such as when an institution promotes the notion of greater professional fulfillment for faculty in becoming a published scholar or in receiving an award of a research grant. Generally speaking incentives fall into three categories: monetary, time, and ego. A general rubric used for the intended effect of these incentives is *faculty development*.

Much has been written in research administration about inducements or incentives to encourage faculty members to seek sponsored grant and contract funding. Two well-known researchers in this area, Drs. Michael McCallister and Terry Manns, have developed a unique approach to explain the role of incentives in faculty development by asking the question: “What do faculty want?” Their study shows that in general peer “acknowledgement” and “enhanced standing within one’s profession” rank very high with senior faculty. For junior faculty, while those things are nice, financial rewards also are very important. It is generally financial incentives that form the core research incentives.8

8 In an educational institution where research is not a priority and does not always result in obvious rewards, inducements, known as incentives, are often thought to be a key to greater research activity. There is much information available from colleges and universities regarding the incentives offered by their respective institutions. As the material is examined, it becomes obvious that the level of incentives range from a cash bonus and a larger piece of the indirect cost distribution on the financial side, to inviting researchers to an event to recognize their research achievement on the promotional side. An interesting group of incentive policies to examine is: United Arab Emirates Faculty Incentive Policy, http://72.14.207.104/search?q=cache:6_4T3w75s7YJ:sra.uaeu.ac.ae/English/research; and Policy of Research Incentives, Fort Hays State University, May 29, 2002, www.fhsu.edu/policies/directory/research_incentives.html.

The University of Oklahoma has on its Web site the SRI: Sponsored Research Incentives Program, at http://research.ou.edu/policy/SponsoredResearchIncentive.htm, which deals exclusively with F&A distribution.

See also NCURA Neighborhoods, Interactive Learning Series, June 17, 2003, *The Ins and Outs of Faculty Incentives*, with Bob Lowman and Pam Whitlock.

Many national and regional professional conferences include presentations that emphasize the tremendous variety of so-called incentives in place at colleges and universities. As expected, sessions are offered that particularly target the concerns of PUIs and historically black colleges and universities (HBCUs), as sponsored research activity is more exceptional at these institutions than at larger institutions.
To understand the entire spectrum of research proposal incentives, the McCallister/Manns distinction between junior (nontenured), mid-career (mostly tenured), and senior (tenured) faculty is helpful.9

At the risk of oversimplification, McCallister and Mann tell us that
◆ junior faculty require mentoring, developed databases in their respective fields, proposal writing assistance, personal contact assistance, start-up labs and support for related costs, and travel money;
◆ mid-career faculty require travel money, some proposal review, assistance with new and modified methodologies, release time, and assistance completing their promotion packages; and
◆ senior faculty require funding for seminars, networking travel funds, teaching assistants, and support for large-scale (and sometimes high-risk) ventures such as research centers and multidisciplinary programs.

The PUI wanting to implement any incentive program must have institutional commitment ranging from the financial allocations from central administration to the setting of divisional and departmental priorities.

Mentoring would likely be the least costly of any incentive, depending upon how the senior faculty member arranges the effort. Mentoring is, in essence, “being shown the ropes.” This type of advising function from senior faculty would involve no additional cost and could produce real dividends for the junior faculty member. The effectiveness of any mentoring is contingent upon the expertise held by senior faculty members and whether assistance is requested by a new hire.

Helping faculty with proposal writing could be accomplished by using existing qualified academic and/or experienced administrative staff. Most other faculty incentives, however, likely would involve expenditures that are not routinely included in departmental budgets at smaller colleges and universities.

If an institution intends to place research expectations on junior faculty, discussions regarding such expectations should start during the hiring process. If there are research expectations, all candidates must be informed about them, and the PUI should be prepared to address the inevitable follow-on questions from candidates regarding research start-up funds and teaching loads.

Incentives are intended to provide faculty members with the wherewithal to perform research and entice faculty members to make the effort to write proposals for external funding. The incentive approach usually emphasizes positive inducements to reward research and research-related activities. Positive inducements range from special events to acknowledge research activity and to publicize the names of all grant

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9 “Faculty development” is also a term used to include not only incentives for research activity but also training and related compliance issues. See Michael McCallister, “Faculty Development,” *Journal of the Society of Research Administrators*, Winter/Spring, 1996-1997. The text refers to Michael McCallister and Terry Manns, “Faculty Development Programs: Ideas for Thought,” NCURA Annual Meeting, Washington, DC, November 2004.
and contract recipients, to travel and research perquisites that support, and recognize, 
the importance of research activity.

Institutional (Internal) Research Funding

An important incentive that most smaller institutions offer in one form or another is 
institutional research funding. “Institutional” means that the funding is provided by 
the institution itself. Such funding represents an acknowledgement by the institution 
that research is fundamental to institutional culture and, most importantly, that the 
institution that offers this type of internal award program recognizes that its faculty is 
comparatively disadvantaged in seeking external funds when compared with faculty 
from larger institutions.

Institutional funding programs may be institutionwide or within specific divisions 
of the institution, and the pool of funds offered for this funding can range from $50,000 
campuswide to a small college in California, for example, that assigns $400,000 to this 
function. Institutional funding is typically used to

◆ generate quality research projects,
◆ support the continuing development of existing research projects,
◆ help active research faculty members change research direction if their project focus 
is no longer fundable, and
◆ help complete ongoing project development that is close to submission stage.

The broad scope of this type of funding exists in recognition of the many levels of 
faculty experience and to assist a project in development that might require a push to 
reach a state where it could be seriously considered for submission to a funding agency 
or ready for publication in a recognized journal. For example, for a junior faculty 
member, the funding could be used to initiate his or her first external funding attempt 
beyond the dissertation, while for mid-to-senior-level faculty, the funding could be 
used to facilitate the enhancement of previous research or the transition from one 
research focus to another.

Programs of institutional research funding may take many forms and reflect different 
goals or requirements, such as the following:

◆ Often summer salary support is requested to provide income to faculty who would 
otherwise be teaching during the summer and unable to commit sufficient research 
time
◆ In the social sciences and humanities, travel is often crucial to reviewing documents 
in distant libraries throughout the world
◆ Support for data storage costs and computer or computer component charges often 
is provided
◆ Student support is often necessary for the data gathering and analysis component of 
research projects
At most institutions the tangible goal of such a program is the actual submission of a proposal to a funding agency. Hence the goal is to transition a research program from the institutional research category to the sponsored research category.

**Internal Research Activities.** Much of the research that takes place at a PUI is internal institutional research. Institutional research at colleges and universities without a research history is frequently the only research that is examined when the institutional promotion and tenure process evaluates academic careers in light of the traditional standard of teaching, research, and service. Some of these institutions might have less-intensive publication standards and are not necessarily committed to transitioning faculty research to a level of much greater recognition outside the institution. Insufficient internal financial commitment for sponsored research and an acceptance of a recruitment and hiring philosophy that prioritizes collegiality over scholarly potential, reinforces at PUIs a standard of internal institutional research over extramural research.

Colleges and universities that want to step up internal institutional research goals must deal not only with the associated pull on the institution’s financial resources but also with the scope of these funding programs. It is generally accepted that a standard for proposal submission can be set for the physical sciences, natural sciences, and engineering, but what about for other departments — such as the humanities, social sciences, business, and nursing — where the potential sources of funding are not as readily available? All institutions wrestle with this issue. The result is usually a “publication” standard for those disciplines where sponsored funding is more limited.

However, the difficulties do not end with the creation of this standard. If publication is a standard, then the quality of the journal, or of the book published, must be assessed, and the quantity of articles or monographs that satisfy desired goals must be determined. Of course this is a problem for all institutions, not only PUIs.

Further, in the case of creative works such as theatre, visual arts, fiction, and poetry, standards of project evaluation are very difficult to determine. Usually what one proposes to do artistically in a research proposal is related to what the artist has done previously, and no detailed “statement of work” applies. For beginning developers of creative works, awards do not have an experiential or tangible standard and must, therefore, be determined using a different measure. Of course this is a problem for all institutions but smaller institutions often cast their nets broadly for faculty with whom to work. At larger institutions the clientele are often well established in the natural and physical sciences and engineering. This is less often the case at smaller institutions. Therefore, it is possible, for example, that a National Endowment for the Humanities “Summer Seminar” grant could be a very prominent component of the research portfolio at a PUI with little science and engineering research support.10

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10See the NEH Web site: www.neh.gov/projects/si-university.html.
Setting Resource Priorities

The establishment of priorities is crucial to the coordinated effort to advance any endeavor, but it is especially true when one is challenged by severely limited resources. It has already been said that efforts by smaller institutions to increase sponsored research are limited by the general resources available for research at the typical PUI. Most organizations demonstrate the importance of a goal or activity in their willingness to invest in its accomplishment. Therefore, given severely limited institutional resources to support research, how can an institution determine how best to use its money?\(^{11}\)

Resource Distribution

There are at least three schools of thought in considering resource distribution, as follows:

◆ One approach is to spread the resources like sowing seeds on a field and wait to see which ones germinate.
◆ A second approach is to host an internal competition to determine the most promising (and realistic) ideas for research, and then fund those that rise to the top.
◆ A third approach is to find faculty who already are involved in promising research and apply resources to their endeavors to help turn them into research “stars.”

The first approach, when used at an institution without a history of research activity, can be inefficient. Good ideas alone are insufficient for winning competitive grants. Certain potential researchers at these institutions may not have had the resources to stay current in their respective disciplines and therefore may frame ideas and concepts that are not state of the art.

The primary difficulty with the second approach is the degree of rigor brought to internal project reviews by the submitting researcher’s colleagues. In other words, the tendency often is to exhaust the funding available for the support of institutional research projects by funding any and all projects, whether or not the proposals are deserving of support. This is an understandable institutional dynamic, but one that can often lead to support for both promising and unpromising projects.

The third approach is controversial, often autocratic, and the most efficient of the three. The institution could decide to fund only those projects that demonstrate high-quality, productive, publishable, fundable research. The institution could help develop research “stars,” whose work could eventually heighten the reputation of the institution or one of its centers or programs, expand to provide the institution additional distinction in and funding for the research area, and serve as a role model for other

\(^{11}\) This discussion is meant to be controversial. There is a raging debate between the democratic impulse to fund faculty “fairly” based upon a set formula that attempts to discern potential and evaluate costs, versus increasing resources for projects and people that could be termed the institution’s “best investments.” Some maintain there must be a landmark that identifies the institution as producing some research of distinction in order to provide a basis for realistic and timely research growth.
departments. The funded projects could be in a research area that if promising could become the basis for future strategic allocations, faculty hiring, and graduate student selection. Ultimately this approach to spending institutional resources could prove to be the most cost effective in that institutional resources would be sustaining a demonstrated capability rather than investing in an unproven area.

The controversy surrounding this practice is that it appears to be unfair. There is greater equality among a faculty whose members uniformly lack distinction than among a faculty with a few conspicuous “achievers.” At many PUIs, instituting the third approach would face resistance from the faculty and be difficult to establish. On the other hand, overcoming the difficulties may be worth the effort, as the practice could help to establish a significant research presence at the institution.

\[\text{2305.6 Offices of Sponsored Programs at PUIs}\]

A research administrator occasionally encounters faculty researchers who believe that “every boat floats on its own bottom.” Such researchers feel they are in command of their own “ship” independent of anyone else’s “ship” and independent of the institution itself. These researchers, particularly if they are experienced, may feel they “know everything necessary to know” about funding available to support their research projects. For such faculty members, the staff in the sponsored projects office becomes more like obstacles to overcome before the research funding can be established, than expediters or facilitators. Further such faculty members often have indifference for many of the institutional controls exercised by OSPs to protect universities.

It is in this area of sponsored research — that of accepting support from and recognizing the contributions of the institution’s OSP — where smaller institutions often have an advantage over larger ones. Because smaller institutions frequently have less-experienced faculty researchers, OSP staff members are usually viewed favorably by faculty when they take affirmative steps to encourage, facilitate, and expedite research grants and contracts. When the OSP staff tells a PUI faculty member that institutional concern over publication language, intellectual property controls, and certain clauses in an award are to protect the PI and the integrity of the scientific work, the input usually is welcomed and accepted.

At the PUI a fundamental activity of the sponsored projects office is to build a client base. The number of faculty who submit proposals usually is relatively small and the OSP must support the faculty by continually disseminating targeted information on funding opportunities. While this is an important function at all institutions, in the case of PUIs it is particularly important. At larger institutions faculty members themselves likely are monitoring funding opportunities, whereas at a PUI the sponsored programs office may be the only body doing so. Because finding sources of funding is so critical, in disseminating funding opportunities at PUIs, sponsored projects staff should be always encouraging of and solicitous to faculty. (For a related discussion, see “Benchmarking the Small Sponsored Programs Office,” ¶2360.1.)

Smaller institutions typically have policies and official institutional guidance in all areas in which it is required by appropriate authorities and develop policies in other areas as the need arises. The greater the depth and breadth of the organization’s re-
search experience the more explicit and detailed the policies of the institution would be to handle existing responsibilities and prepare for similar issues in the future. One of the primary concerns of smaller institutions relative to new sponsor initiatives is that sponsors will assume that complex procedures are required for full compliance at institutions regardless of size, and regardless of whether the targeted activity happens once or one thousand times per year.12

Communications with Other Offices
The OSP at all types of colleges and universities must interact with several other institutional offices on a regular basis. Among these are
◆ payroll,
◆ student affairs,
◆ institutional advancement,
◆ accounting (more specifically research accounting),
◆ procurement,
◆ graduate studies,
◆ public affairs,
◆ offices of the individual deans and departmental chairpersons,
◆ student financial aid,
◆ general counsel, and
◆ safety and compliance.

At smaller institutions it may be necessary to introduce many of these above-listed functions to the “special handling” required of sponsored funds and to the terms and conditions of research awards that may not completely compliment similar institutional policies. Larger institutions, because of their commitment to sponsored research activity, are organizationally well versed in the distinction, for example, between permanent and soft money appointments, general and sponsored expenditures, and scholarships versus student stipends. Smaller, less-research-active institutions may handle these types of distinctions on a case-by-case basis because the need to know them is infrequent.

12 While there are many organizations associated with higher education that have historically done an excellent job at analyzing the costs to institutions attributable to federal or state initiatives, many of the most significant define their membership by size of financial activity, thus effectively excluding smaller institutions. The organized vigilance regarding these issues, to be fair, is usually detected by larger institutions and communicated to smaller ones through highly respected organizations such as the National Council of University Research Administrators (NCURA, www.ncura.edu); the Society of Research Administrators (SRA, www.srainternational.org); the National Council of University Business Officers (NACUBO, www.nacubo.org), and the Association of University Technology Managers (AUTM, www.autm.org) to name just a few.
Senior Administrators. Where research achievements are visible and heavily promoted as part of an institution’s public relations efforts, the senior administration is attentive and supportive of research activity. For example, in large research institutions that have teaching hospitals and hundreds of health-related grants and contracts, the institution’s president is invariably well informed about the National Institutes of Health and fiscal and compliance issues associated with that prominent research sponsor.

In smaller institutions, which do not traditionally have research achievements as a major component of the institution’s identity or public relations efforts, specific knowledge about sponsors and their practices and policies may not be as readily known by the institutions’ chief administrators. An OSP at such an institution, therefore, may have to make some effort to promote internally the institution’s research activities and inform the senior administration of critical issues, as appropriate.

¶2305.7 Staffing an Office of Sponsored Programs

Some large institutions appear to have the equivalent of law firms working in the area of sponsored research compliance. Whether or not this is actually true is not important. Rather it reflects the current complexities surrounding sponsored research compliance. In other words, even if an institution doesn’t have a law firm working for it, it certainly could use one. The ability to effectively address research compliance is another area where PUIs and large institutions differ.13

Sponsored projects staff often find that college administrators appreciate the role OSP staff play in ensuring that complex federal research compliance standards are properly interpreted and adhered to. The creation of the position of compliance officer at many large institutions speaks to the critical need for personnel with expertise in the research compliance arena. Smaller institutions must comply with most of the same requirements as larger organizations, however smaller institutions, whose research volume and resources would not support dedicated staff, often rely more on professional groups to help them assess their compliance capabilities.14 (For a related discussion, see “Establishing Technology Transfer Operations at PUIs,” ¶2320.1.)

Staff ‘Generalists’

Sponsored projects staff are notorious multitaskers and nowhere is this more evident that at the PUI. In some of the smallest institutions it is not uncommon to have grants and contracts or grants and development (or grants and fundraising) located in the same office, where the same individuals work in both areas. The “full-service” office, an office that performs pre-award and post-award grant and contract functions, is also typical of many OSPs at small institutions.


14 See the organizations listed in footnote 12 above.
An office of sponsored programs at a PUI would require, at a minimum

- at least one person to track and disseminate funding opportunity announcements;
- one or two persons to assist inexperienced faculty develop proposals;
- one or two persons (contingent upon the number of proposals) to examine and process proposals;
- at least one person to establish the sponsored financial account in the event of an award (often the same person who processes the proposal);
- an individual to stay abreast of the latest compliance requirements (from electronic proposal submission to human subjects); and
- an individual to monitor technical and financial reporting requirements.

The above persons likely would be full-time employees, where one person would handle more than one task. Obviously smaller offices typically require “generalists,” as opposed to specialists.

As many students of organizational theory have long recognized, the more complex the requirements of an organization, the stronger the tendency toward formalization.15 It is, therefore, understandable that larger institutions with numerous and diverse researchers submitting an ever-increasing number of proposals, often develop OSP structures that have staff members who specialize in the core sponsored research functions (i.e., pre-award, post-award, and financial compliance) as well as other research-related functions (including intellectual property and human research subject protections). This is not likely true of PUIs.

The scale of the research activities at the PUI allows for a greater likelihood of cooperation across disciplinary lines than at some larger institutions where each divisional unit typically attempts to function with as much independence as possible.

**Responsibilities of Central vs. Division Staff**

PUIs would overwhelmingly have centralized OSPs, but the nature of the institution itself might mean that certain functions usually performed solely by the OSP are performed elsewhere. In the situation where the PUI has developed a “star,” this researcher may have the local resources for a type of assistance that permits the researcher to do funding searches, prepare payroll documents, and produce institutional

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15 Of the many discussions of this phenomenon that run throughout the literature on organizational theory and public administration one of the most lively is the discussion characterized as “organizational pathologies” in the popular book by George Berkley and John Rouse, *The Craft of Public Administration*, Ninth Edition, McGraw Hill, 2004. Their discussion conveys the inevitability that as organizations become larger and more complex, personal, informal practices become overwhelmed by new people, new methods, and new requirements. Formal rules, specific assignment of responsibilities, and a more formal bureaucratic structure evolve to handle the additional demands as the organization grows and diversifies. To use an extreme, but not rare example, gone are the days of the person who knew exactly who to call to get something done; instead now one often encounters a prerecorded message providing various “touch-tone” options for the required service.
reports and to form separate centers of activity that are able to perform many of their administrative responsibilities in-house. These practices would still require the “sign-off” of the OSP, which is the cognizant authority for grant and contract activity.

The number of subdivisions within any particular organizational structure is clearly related to the size and complexity of the operation. The goal is to have the overall OSP structure at an institution integrate the tasks of the central unit with its division counterparts. This is usually the configuration of larger offices, but there are some examples where certain specializations at the division level can help achieve the fundamental purpose of the central office.

Take, for example, the case of the central sponsored projects office that could not persuade the university president that an intellectual property (IP) specialist should be hired to work with the university counsel. Knowing of the central administration’s intransigence, the dean of engineering contracted with a local law school to have an honor student consult on IP matters. Soon this student’s sponsored research expertise had developed to the point that she was also reviewing material for the biology and chemistry departments and the college of arts and sciences. The central OSP encouraged these shared resources, recognizing that a combination of central and division resources could outperform central office capabilities alone. In a similar vein, a college of arts and sciences was able to hire a technically savvy person who could better perform targeted funding searches than could his counterpart in the central office.

\[2305.8\] Is PUI Research an Oxymoron?

If it is established that large research institutions are better geared for and even defined by the research they perform, then why should smaller, less-prepared institutions bother? There are moments when almost anyone involved with sponsored research at either type of institution has considered this question. The larger institutions receive the overwhelming preponderance of funding in those areas of research that involve a large investment. This is obvious, particularly when one looks at the amount of National Institutes of Health funding flowing to medical schools and teaching hospitals with their tremendous investments in health care facilities and infrastructures.

Similarly large engineering schools have the physical capabilities to accept projects on a vastly larger scale than can engineering schools at most smaller institutions. In other words smaller institutions may not be able to compete with their larger counterparts for awards involving “big science” (that is, certain projects in the health sciences, chemistry, engineering, and applied physics). However, if one looks at scholarship in the humanities and social sciences, for example, one may find that many of the most intriguing hypotheses and analyses today come from faculty research at smaller institutions.\(^{16}\) At the individual researcher level, therefore, where the ideas for research are

\(^{16}\) American Council of Learned Societies (ACLS), Final Fellowship and Grants Lists for Competitions Held in 2004-2005, October 2005, www.acls.org. This document lists 125 grants awarded by ACLS for meritorious projects in the humanities. Of the 125 awards, 26 went to predominantly undergraduate institutions. This is a healthy representation in an area where large infrastructure investment is not required, as would be required for the natural and physical sciences and engineering.
generated and the dedication to a research program develops, many smaller institutions can compete.

Sponsored projects personnel at smaller institutions must support and encourage their faculty members by believing sincerely — and conveying this belief to them — that a research idea or methodology under development at the PUI is as good as that deriving from elite research universities.

\[\text{\textsection 2305.9 Sources of Research Funding for Smaller Institutions}\

Recognizing that there is no “level playing field” upon which research-intensive and instruction-intensive institutions can consistently compete for sponsored funding, federal agencies have created funding programs specifically aimed at providing research opportunities to smaller institutions and schools with scarce resources.

Whenever a research administrator at a PUI approaches a sponsor about its interest in funding a project, he or she should inquire as to whether any special program, or consideration, is provided for smaller institutions. This is not to cry poverty but to alert the funding source of one’s institutional circumstances. Of course the request must be made in the context of full confidence in the project and the researcher.

Due to the academic cultures at small institutions that do not stress organized research and inquiry in a purely scientific sense, the funding of research at the PUI can be considered “high risk.” The “risk,” in this instance, stems from the hope that funded research programs will produce an organized system of scientific inquiries that will incrementally evolve and produce valuable insights over time in natural, physical, and/or theoretical processes that prove valuable to researchers in particular fields of study. If the project analyzes one question and fails to sufficiently develop related lines of inquiry, for example, it cannot sustain itself and terminates.

The average research effort at the PUI is to prepare a proposal to address a particular issue and to “interrupt” one’s usual PUI responsibilities while examining that question. The goal of the PUI researcher is rarely to establish a line of ongoing inquiry through sponsored activity that would continue over years and, accordingly, provide a permanent adjustment to teaching, service, and research time distribution. The prolonged research project is the expectation of the research university and the exception at the PUI.

\textbf{Targeted Programs}\

Federal agencies are responsible for using public monies wisely and efficiently. Federal agencies, including the National Institutes of Health (NIH) and the National Science Foundation (NSF) have determined that their research grants should not only meet an efficacy and efficiency standard, but a representative standard as well. Thus support of the scientific elite is balanced against the intention of spreading funding around to include high-risk research that may have an opportunity to show substantive strength. Federal research funding is used to fertilize the college and university environment overall in order to generate creative research concepts and methods.
Funding programs for research at the PUI anticipate that resource levels will differ from those at larger institutions. Many programs exist with smaller institutions in mind, such as the following:


- *NSF Research in Undergraduate Institutions (RUI)* and *NSF Research Experiences for Undergraduates (REU)* (www.cimms.ou.edu/~cortinas/nsf4.html) (This site includes 137 pages of program descriptions for NSF REU programs.)


In consideration of the differences between large research institutions and predominantly undergraduate institutions, funding programs for smaller institutions have been developed that are often described as small or seed grants. Ideas and methods funded under these programs are in a developmental stage. Results from successful seed projects may lead to an opportunity to propose larger, more expensive projects that could compete with research institutions for funding.

**Set-Aside Programs.** Another approach to target PUIs used by large funding entities is the “set-aside” program. Under these programs, agencies take a portion of their allotted research funding and reserve (“set aside”) a portion for a special category of institutions or for a special program or activity. This practice has become somewhat controversial because in awarding such grants, factors other than strictly merit are considered. Nonetheless the use of set-aside programs has increased the number of research proposal submissions to federal agencies from instruction-intensive institutions.

**12305.10 Conclusion**

Undoubtedly many PUI faculty members possess the requisite skills, energy, and persistence to be productive, long-term research faculty. It is the role of the sponsored research administrator at these smaller colleges and universities to encourage and assist the faculty, regardless of the level of support needed, in building research project proposals that have a solid chance of being funded.

Although the faculty may not necessarily be prepared and the culture of the smaller institution not specifically geared for a major investment in research activity, research — and the attendant scholarship and publications that it produces — remains a steadfast measure of academic quality and vigor in institutions of higher learning regardless of their size. Consequently smaller institutions likely will remain in a somewhat permanent “transition stage” where the faculty is committed to the fundamental value of instruction while also attracted to the rewards and recognition that can be derived from sponsored research funding.
Supplementary Material

This section includes expanded coverage of topics relating to special issues for predominantly undergraduate institutions. These materials are culled from a variety of authoritative sources.

12320.1 Establishing Technology Transfer Operations at PUIs

By Stephen Auvil, Director, Office of Technology Development, University of Maryland, Baltimore County

Universities with limited research activity like those at predominantly undergraduate institutions (PUIs) have an opportunity to engage in technology transfer activity; however, they must often overcome the challenges of creating the required infrastructure in an environment of scarce resources. There are many reasons why a PUI would want to engage in technology transfer activity including fostering economic development, creating a potential new revenue source for the university, and recruiting entrepreneurial faculty. For a PUI that wants to engage in technology transfer activity, it is helpful to understand what resources are required to establish technology transfer operations.

Organizing the Technology Transfer Function

Rather than establish a stand-alone technology transfer office, PUI’s have a number of options related to technology transfer activity. The first option, easily enough, is not to engage in such activity. A university can remain in compliance with the Bayh-Dole Act (implemented by 37 CFR 401) by waiving title to its inventions. (For a full discussion of the Bayh-Dole act, see ¶1905.12.)

When faculty create inventions in federally funded research, the ownership, or title, of the invention can be waived to the federal government. With other sponsors, title can be waived to the sponsor (a practice that corporate sponsors would embrace), or the research can be published thereby releasing technologies into the public domain. A conservative approach to engaging in technology transfer is to ask another university to manage your inventions or to assign them to a patent management firm that will commercialize technology if it looks promising. In either case, the institution likely will be required to pay a fee or share a portion of any licensing revenues with the organization managing the institution’s technology.

Reminder

What is technology transfer? Technology transfer, sometimes referred to as T2, is the process of developing practical applications — commercial products and services — for the results of scientific research.

1 This discussion is based on material presented at the NCURA Annual Meeting, November 1, 2005.
The approach that many PUIs take is to start technology transfer operations within their sponsored programs office. This is a good approach for a small institution because a sponsored projects officer can spend a portion of his or her time on technology transfer matters. Once an institution has enough invention disclosures, the technology transfer operation can transition into an office separate from sponsored programs.

**Assessing Capacity**

One of the challenges for a PUI is determining when it makes sense to establish a technology transfer operation and what it costs to have such an operation. One can look to the data collected by the Association of University Technology Managers (AUTM) in its annual “Licensing Survey” to develop benchmarks based on national averages, or one can look to peer institutions that have already established a technology transfer operation.² (See Figure 2320.1-1.) It is best to look at both models and other factors, such as the nature of research conducted at the institution and the degree of entrepreneurial spirit ingrained in the institution’s culture.

**Figure 2320.1-1: Technology Transfer Efforts: Benchmarks**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Disclosures per $10 million in research expenditures</td>
<td>3.94</td>
</tr>
<tr>
<td>Legal fees per total U.S. patent applications filed</td>
<td>$14,989</td>
</tr>
<tr>
<td>Disclosures per professional FTE</td>
<td>17.28</td>
</tr>
<tr>
<td>U.S. patents filed per disclosure</td>
<td>.53</td>
</tr>
<tr>
<td>Start-up companies per 100 disclosures</td>
<td>2.54</td>
</tr>
</tbody>
</table>


The AUTM Survey results can provide a point of reference for establishing a number of metrics. The first metric to consider is the number of disclosures that an institution should be generating. Using the AUTM Licensing Survey for FY 2003, one can establish a benchmark for this metric. By taking the total number of disclosures for U.S. universities (13,718) and dividing by total research expenditures for the same institutions ($34.8 billion), one can derive a ratio of 3.94 disclosures per $10 million in research activity. A small institution with a heavy emphasis on the physical sciences, natural sciences, and engineering might be expected to exceed this number, while an institution focused on research in the social sciences and humanities might have a slightly lower figure. In any case, this metric suggests that an institution with $20 million in research expenditures can be expected to generate about seven–eight invention disclosures per year.

² Further information about AUTM and its licensing survey can be found at www.autm.org.
**Gauging Expenses**

The largest expense for a technology transfer operation is typically patent expenses so it is important to be able to estimate these costs before deciding to engage in technology transfer activities. Again, one can look to the AUTM statistics to benchmark this metric. (See Figure 2320.1-2.)

**Figure 2320.1-2: From Benchmarks to Budget**

![Diagram showing budget calculations]


**Legal Fees.** If the total legal fees spent by U.S. universities ($176.2 million) were divided by the total number of U.S. patent applications filed (11,755), the average spent per patent was approximately $14,989. This is a rough number that does not take into consideration a number of factors, including the costs of foreign applications, the lower costs of filing continuation applications, and other legal expenses paid.

The actual cost of prosecuting a patent also varies with the type of technology and its complexity. The AUTM data suggests that 0.53 U.S. patents are filed per disclosure (7,203 new patent applications/13,718 invention disclosures), so an institution generating 7–8 invention disclosures per year should budget at least $60K (or $60,000) (8 disclosures * .5 patents/disclosure * $15K/patent) for patent expenses each year.

**Staffing.** The other greatest expense for a technology transfer operation is its staff salaries, so estimating the size of the staff required is another important consideration. The AUTM Licensing Survey data indicates that on average each licensing full-time equivalent (FTE) manages 20.97 disclosures (13,718 invention disclosures/654.15 licensing FTEs). A licensing person is typically a professional that evaluates inventions, manages patent prosecution, and negotiates licenses.
These individuals often rely on support staff to manage a variety of the administrative functions required for a technology transfer operation. The AUTM Licensing Survey data also indicates that the ratio of support staff to professional staff is approximately one to one (654 Other FTEs/654 Licensing FTEs) for U.S. universities. Therefore, an office with seven–eight disclosures would likely require about 0.5 FTE at a professional level and 0.5 FTE for support staff. Estimating $90K as an annual salary and benefits for a professional level person and $52K for a support person, one should budget approximately $71K ([90K * 0.5] + [52K * 0.5]) for staff salaries.

Institutions with mature technology transfer operations typically require more administrative support due to the larger patent and license agreement portfolios that accumulate over time. Newer offices may not require the same degree of administrative support. The AUTM average is likely skewed toward established and mature offices. The salaries used above are rough estimates. AUTM has published a salary survey that can be used for a better estimate of salaries. Using this methodology, an institution conducting $20 million in research annually would need to budget approximately $131K ($60K for patent expenses and $71K for staff) for a basic technology transfer operation.

Examining Other PUI Programs

Another approach to benchmarking is to look at peer institutions. The AUTM Survey data can be useful for this as well. It is useful to find a number of “peer” institutions that can be used for comparison. The challenge is that it is difficult to find peers with equivalent research activity. Rather than making direct comparisons with peer institutions, it is useful to normalize data to the total research expenditures. So, one would compare disclosures per research expenditure rather than simply disclosures. It might also be useful to normalize to the number of disclosures received if one’s disclosures vary significantly from what one would expect for the level of research expenditures at your institution. In either case, this approach provides a little more flexibility and makes it possible to take into consideration the type of research conducted, the entrepreneurial culture, and other factors when selecting peers.

The methodologies described above can be useful for estimating the costs of establishing a technology transfer operation or benchmarking an existing operation. Using the totals for all U.S. universities reporting to AUTM likely skews the data to an average U.S. institution. PUIs, by definition, would probably not be considered average in the company of major research institutions; therefore, the best approach might be to identify a number of peer PUIs and perform an analysis similar to that described above using totals from the selected peers rather than totals from all U.S. universities reporting to AUTM.
Conclusion

Establishing a technology transfer operation is an important decision for an institution and a number of factors could be considered including its mission and its environment. Nevertheless, it is useful to have a frame of reference relative to other institutions. The AUTM Licensing Survey data can be used in a variety of ways to provide that reference.
The Role of External Grants in Faculty Development at Predominantly Undergraduate Institutions*
Sally J. Southwick, Colorado College

Faced with shrinking budgets and the pressure to secure external dollars, all too often, we get trapped into viewing faculty grant support as being about money. It is never just about money. Rather, the work of applying for and securing external funding is more fundamentally about faculty development — that ongoing process of becoming better educators, researchers, scholars and practitioners who contribute new knowledge to their disciplines and bring greater visibility and prestige to the institution. With this view in mind, professionals working in sponsored programs administration, as well as deans, provosts, and department chairs, can promote the grants application process in ways that will benefit faculty across all disciplines and at all stages of their careers. Here are some suggestions:

First and foremost, keep the focus on the applicants and on the process as much as on the product. This is not to say that the desired outcome — a successfully funded proposal — isn’t important, but the process itself promotes professional development and benefits faculty and their projects.

Help faculty view the proposal development process as an integral part of research and as a creative activity in itself. Writing a grant application can provide faculty with the opportunity to think critically about their work and to articulate ideas more fully, as well as to identify goals, possible outcomes, and the intellectual merit of the project. Proposal development itself is a form of scholarship because it helps focus on the larger context for the project and express why it matters beyond the individual’s interest or program. In this way, proposals can serve as incentives to think clearly and in-depth about the work’s relevance. For example, a junior faculty member in English needed to write a short proposal for a library residency to conduct archival research. The application activity helped him to focus on how the chapter of his manuscript that would be based on the library’s collections related to the whole of his book. As a result of crafting the proposal, he ended up with a chapter outline and greater clarification of how the chapter fit into his overall interpretation.

In the long-term, faculty can use the proposal format to begin articulating new ideas or areas of research and to reflect on one’s own intellectual development and direction. The advanced planning necessary to apply for grants creates a timeline for professional activities, allowing faculty to chart their careers three or more years ahead. Developing such a professional plan can involve activities such as outlining a project, establishing a research agenda, an experiment or field work schedule, or a writing plan, and identifying what kinds of results (e.g., conference papers, articles, and book chapters) can be anticipated at set points in the future. Newly-tenured faculty can plan for a sabbatical year or a longer-term project, such as a translation. More senior faculty can pursue interests with broader effects, such as a science outreach program.

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Encourage faculty to approach proposals as a scholarly work in progress. Because many proposals are peer-reviewed, the application process can require the same level of academic rigor needed for drafting a scholarly article or conference paper. Both share similar expectations of critical consideration and constructive feedback. This process of incorporating high levels of academic rigor can be especially important for junior faculty applying for highly competitive federal grants. As research administrators, we should encourage junior faculty to submit proposals knowing that external review may help shape their project’s development. For instance, early in her tenure-track position, a chemist applied to the National Science Foundation and to the National Institutes of Health, anticipating at least two preliminary rejections before success in getting the grant. She planned ahead and sought smaller grants from private funders while she intentionally used the process of applying to the NSF and to the NIH and getting peer review to clarify and improve both her successive proposals and the project’s structure.

Sponsored research officers can help faculty view grant activity as the basis for later work, reframing the text created for proposals for subsequent uses. A short, targeted application could become material for an article or conference paper abstract, while a longer one that describes a whole project could serve as the basis for a later book proposal. Difficult though it may be, faculty should never view grant applications as an isolated effort, but rather expect them to serve other purposes and weave them into longer-term professional development plans. Faculty can even use proposal text as draft material for third-year review or tenure files or for other forms of professional development plans. Time spent articulating ideas and trying to communicate them more clearly is not time wasted; this focus will ultimately strengthen the project. Viewing grant applications as part of a larger professional activity can help remove some of the sting of inevitable rejections.

Grant and research support can be tailored to [extend] support to all phases of faculty careers in all disciplines. Sponsored programs administrators can help to make clear the role that grants can play for junior faculty, for recently tenured faculty, and for senior faculty who may be seeking new directions or trying collaborative projects. In the case of junior faculty, whether in the humanities or the sciences, applying for a number of grants of varied types and sizes can be an important way to get their work in front of peer-review panels, which can be as much a part of career building as winning the award.

Established faculty can be more targeted in their applications, because they may already be known to the reviewers, have proven their ability to complete the proposed work, and have a successful track record of getting grants. For the established faculty at his or her mid-career, a prestigious national award can be used to leverage a promotion. The award can also lead to invitations to serve on the editorial or governing board of a prominent journal or give a lecture at a prominent event.

In a similar vein, senior faculty can use high-profile grants to secure invitations to coveted visiting professor positions or can use external funding to explore new lines of collaborative research with colleagues elsewhere, whether at a social science institute or a research lab in another country. Small colleges in rural areas may especially benefit from international grants for faculty exchanges.
Proposals and the resultant grants can be another way to be an active, visible part of the profession, connect with others in or beyond the discipline, and can lead to new professional networks. For example, a senior faculty member in European Studies, in need of time more than monetary support, applied for a residency at a writer’s colony where freedom from campus and domestic obligations and interaction with other writers assisted her in revising her novel. Publication of her creative work will enable her to contribute to the literature of her native culture after decades of studying and writing about the literary contributions of others, and it will put her work before a larger audience, including a nonacademic one.

In another case, a faculty member in religious studies at a rural college who works on Native American religious rights received a small grant early in his career to enhance a service-learning component in one of his courses. At a grant-related conference hosted by an Ivy League research university, the religious studies faculty member made connections with colleagues from other institutions and discovered ways to become more involved with public scholarship that addresses the needs of tribal communities. During the faculty member’s leave, he sought additional training in law and identified the kinds of applied research in which he could involve his students after his return to the classroom.

Grant support can have effects not only on individual faculty careers but can also enhance the relationship between faculty and the institution. The proposal planning process can be an occasion for faculty to consider the connections between their research interests and the needs and goals of the college, and to think more about what potential effects an external award would have on the institution. Will the research or project result in a new course? Will the grant add expertise in a certain area or initiate campus-wide discussions on a certain topic? Will it create outreach possibilities or lead to professional activity elsewhere and a potential for sustained collaboration? Externally funded research can provide the faculty and the administration with an opportunity to discuss the relationship between individual scholarly activities, teaching, and the broader campus climate. Grants can enable a small group of faculty to host a conference or a summer institute that brings in colleagues with a range of expertise or fund a visiting scholar who is able to assist with course development and research training for students.

Similarly, grant administrators can help successful applicants see the informal mentoring potential in their activities and use their grant experiences as a way to develop internal leadership. Those who have received grants can serve on campus grant panels or do peer-to-peer advising on seeking external funding. Through such activities, faculty can talk with their colleagues about what they’ve learned through the grant application and project management process — what works and what doesn’t, administering the grant, implementing the project, reporting progress, and sustaining a positive and productive relationship with the funding agency. Sharing experiences with other faculty colleagues helps to maximize learning and deepen the kind of college culture that supports grant-seeking and creative scholarship.

In summary, as sponsored programs and research administrators, we need to be mindful of individual needs and connect with faculty on a personal basis before they
begin the process of identifying and applying for grants. This prior contact makes it possible to be better prepared to help faculty navigate the entire process — when they’re ready — and keeps the focus first and foremost on individuals. The personal and professional goals of faculty are intertwined so we should always be aware that grantseeking and success in securing external funds can have lasting effects on individuals, their departments, and the larger institution.
Managing Internal Competitions*
Christa Johnson, Southern Illinois University Edwardsville

Federal funding agencies have been placing special restrictions and eligibility requirements on proposal submissions with increasing and alarming frequency. Such restrictions and requirements include limits on the number of applications accepted per funding cycle as lead or non-lead institution; the type of institution allowed to submit; the level of established research at an eligible institution; and the level of previous funding from specified sources. This trend is viewed by some in the university community as a cost-cutting effort, which effectively shifts the burden of proposal review from the sponsoring agency to the applicant institution. Despite concerns, no slow down is expected. It is crucial, therefore, that institutions step up their efforts to explore policies that address the challenges presented by sponsor limits and eligibility requirements, and develop effective and efficient procedures to pre-screen proposals and manage internal competitions.

Quickly Identifying the Programs
The first management challenge is how to quickly identify programs. Research administrators commonly use the phrase “limited competition” interchangeably with “internal competitions” to describe any program that would require internal coordination before approval for external submission. The phrase “limited competition,” however, can cause confusion as the industry has yet to adopt a standard definition. For example, some sponsors, such as NIH, use the phrase “limited competition” in their announcements for a group of programs that do not generally require an internal screening system prior to submission. The only way to identify all true limited programs that require internal coordination or competition is to read through each program announcement carefully.

After identifying which programs will require internal coordination, staff must quickly determine the institution’s eligibility, which is no longer necessarily tied to the DUNS number, 501.c.3 designation, status as a Primarily Undergraduate Institution (PUI) or Historically Minority-Serving and Black Institution (HMBI). New eligibility requirements often require quick access to information that is not easily retrievable either from existing grant databases (such as the expiration dates of existing grants received in response to specific solicitation numbers) or from any university information system (such as the number of years of a faculty member’s involvement in a particular field of research). Pre-award offices will ideally have available staff to research institutional eligibility and program limits on a regular basis.

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Establishing Internal Peer Review
A second management issue is how to select which proposal will be submitted to the agency. Peer review is the standard method of ensuring an objective and fair evaluation of research proposals, and some institutions use a separate, internal committee for peer review. However, many institutions neither possess adequate resources, nor have institutional structures in place that would make it feasible to conduct a peer review in every case. In such instances, a standing committee model will suffice, yet, even here, challenges may arise.

It may be difficult, for example, to secure commitments from faculty, deans, and department chairs to serve on a selection committee and simultaneously ensure that adequate expertise is represented. Potential conflicts of interest and individual scheduling concerns will inevitably complicate matters further. More importantly, the internal review process can expect to generate several politically delicate challenges, including adequate and/or proportionate representation at the school/college level, equitable voting procedures, appropriate levels of confidentiality, and assurances that the committee considers the interests of the institution and the chances of the success of each proposal in the external competition. Finding adequate solutions to these concerns can have major consequences for the institution on various fronts. It is crucial, therefore, that the sponsored research offices are not expected to manage the review process in isolation. The importance of these internal competitions should not be underestimated and merits the significant involvement of the highest levels of research administration.

Managing the Process
A third challenge is how to manage the selection process. Most research administrators would agree that transparent and widely disseminated policies and procedures help promote participatory governance and empowerment at all levels and foster the political backing of faculty, deans, and vice chancellors. An investigator’s predictable disappointment about an unsuccessful outcome may be mitigated if, for example, the process and policy is ratified by the faculty senate.

Simple matters such as what to submit for internal review should be clearly delineated. For example, coordinating staff will need to recognize when the amount of material requested is either unreasonably expansive or so narrow that it will likely prompt a second request for information from the committee. In setting the internal deadline, staff will need to ensure the investigator has adequate time after the internal competition and before the external deadline to prepare the much longer and enormously time-consuming full proposal.

Several administrators have reported that the use of a central website for posting all internal and external deadlines, coupled with email announcements referencing the website, can help ensure faculty members at all schools and colleges remain well-informed. A central website can help coordinate among several schools and offices at institutions with decentralized administrative structures. If the central website is linked to a database of past and present competitions, it can also help to keep track of the ever-increasing volume of the competitions themselves, as well as document the entire
process in order to ensure staff and office accountability and control. Tracking and documentation is particularly important since certain aspects of the internal competitions, as well as information about the candidates are often kept confidential.

New Challenges

By all indicators, the research community can expect the trend in sponsor restrictions on proposal submissions to continue to rise. The National Science Foundation’s Integrative Graduate Education and Research Traineeship (IGERT) Program provides a good example. In the past, the institutional limit on IGERT submissions applied only to invited, full proposals. Because there was no specified limit, few administrations kept track at the pre-proposal stage and were therefore often caught off-guard at the last minute when too many full proposals came through the NSF Fastlane stream. This year [2006], the NSF restricted the number of preproposals for IGERT as well. Other federal programs have also begun to include separate institutional limits on the number of proposals they will accept from an institution as lead and as non-lead. This opens up an entirely new area in the field of internal competitions. Universities will not only have to conduct separate internal competitions for all preproposals, sub-contracts and collaborative projects, but will also have to evaluate proposals from these two separate categories against each other.

The policy questions for the institution abound. How is the committee to choose between a proposal from its own faculty as lead investigator, and a collaborative proposal as non-lead with a much larger budget from, say, an institution with a much better research profile, name recognition, and potentially better chance of success? Moreover, should renewal applications be evaluated together in the same competition with new applications or receive special consideration? These are only a few of the areas that will continue to be the subject of discussion for much time to come.
¶2320.4  **Meeting the Challenges of Risk Management and Compliance at a PUI***
Pam Whitlock (retired), University of North Carolina at Wilmington

Based on these definitions (see box), risk management has three steps — (1) identify the probability of adverse consequences; (2) estimate the magnitude; and (3) gain influence over the occurrence.

Risk management is a hot topic in today’s university community. We are faced with threats of violence, legal actions, pandemics, regulatory non-compliance, safety and fiscal/ethical issues. At first glimpse, implementing a process and infrastructure to properly manage these various risks seems insurmountable, especially if the person is at a PUI and the stock answer for every “Who’s in Charge of This?” question is “Them.” In reality, performing a risk assessment and management exercise can be very beneficial, especially at a PUI where the sponsored programs office may be valiantly trying to educate the campus as to the multitude of vulnerabilities facing a maturing institution. A risk or compliance matrix is a roadmap tool validating necessary policies and processes. It can be utilized to justify reports and resources needed to successfully manage external funding. It also can reflect the progress being made during accreditation or audit.

Risk management requires an organizational wide review of every activity that could affect an institution’s ability to achieve its objectives. Yet it can start in just one office. A matrix of events/actions possibly affecting an organization should include assessing the probability and impact of an occurrence, as well as identifying the responsible unit for ensuring proper actions or compliance to a regulation is followed. An inventory of necessary policies and procedures should be included to ensure adequate monitoring for each identified risk. Some of these will be central to sponsored programs, others tangentially related. Use it as an opportunity to take a leadership role and be the catalyst to initiate the process. Set the example.

It all sounds simple, doesn’t it? It’s not. A PUI has both advantages and impediments to successfully implementing the process. As a smaller organization, it is often simpler to get the necessary people together to discuss and formalize a process

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* This article is reprinted from NCURA Magazine, Vol. XL, No. 3, July/August 2008, published by the National Council of University Research Administrators. It is used with permission of the publisher. Pam Whitlock (retired) was director of the Office of Sponsored Programs at the University of North Carolina at Wilmington and is a past president of NCURA.
to implement this. There are fewer levels and the organizational structure is often less complex. On the other hand, as a smaller organization, a PUI may encounter a culture not valuing the risk assessment process nor the compliance activities necessary to mitigate potential risks. The culture of a PUI is normally not inclusive of a focus on research or the compliance infrastructure necessary to successfully grow the programs. We tend to be very centralized. Many tasks that at larger institutions would be distributed to various stand alone units are housed in the Sponsored Programs office and, often, with one person. This consolidation alone increases the risk to an organization unable to establish a separation of duties.

At some PUIs, one may wonder what thought process is behind the distribution of responsibilities. Quite often, it was an attempt by the university to ensure a separation of duties, especially in the financial arena. At the same time, this very consolidation is a strength enabling the office to be aware of nearly all the activities involving sponsored programs on campus. The communication necessary to ensure all “bases” are being covered is often strained during a growth period when a restructuring might be necessary to ensure reasonable workloads. A risk assessment is a useful tool for gap analysis.

At a PUI, faculty have not been as immersed in regulations, protocols, and fiscal responsibility. Teaching (the talents and strengths for which they were recruited) does not require the constant monitoring of financial and regulatory actions. Many have never managed an organizational budget nor managed personnel, contracting, or even adherence to university policies and requirements. The environment at many PUI’s does not lend itself to written policies. If there is a stable, long time faculty, “this is the way we’ve always done it” may be the de facto policy. It then becomes the sponsored projects unit’s responsibility to start the educational process throughout the campus. Recruit select faculty, talk to other divisions and units about issues, gain the buy-in of upper administration, draft policies and float through the channels and be tenacious. Seek out other NCURA PUI members, exchange successful experiences. Take the message back to your campus. Convince upper administration, show examples of peer institution assessments.

Culture has to change, new lines of communication must be formed, and “territorial boundaries” modified. The research enterprise itself may be morphing into a new being. New risks emerge with growth and new organizational units. Managing the risks associated with educating students, being a good community citizen, and doing business with outside organizations becomes critical and must be on the radar of every institution, regardless of size or mission.

There are a multitude of risk assessment/management resources available and can be tailored to your environment, structure and culture. Look around, many colleagues are very willing to share what they have, NACUBO (National Association of College and University Business Officers), business schools, commercial entities, and associations dealing with risk measurement have available examples. This may be a good project for a graduate student to apply their knowledge to a real life situation.
PUI’s are not “different” in that they don’t need to take risk management and the ensuing compliance activities seriously or they don’t see them applying to them. A PUI just sometimes has to approach the problem differently because the culture has not changed as the institution matured. Just saying “NO” doesn’t work unless there is a commitment from the top to do things right. That support must be apparent in both words and actions to make a successful leap to a culture of compliance, understanding and self-assessment. Remember, as Bo Bogdanski said in last month’s issue, not making a decision is a decision. It takes hard work, perseverance, and good leadership to successfully move our emerging institutions forward. I would recommend starting there.
Managing Time by Building Relationships at a Predominantly Undergraduate Institution

Beth Seaton, Western Illinois University

As the director of sponsored projects at a predominantly undergraduate institution I find myself constantly evaluating how I can most effectively manage my, oftentimes conflicting, priorities. Is it more important for me to spend time sitting down with a junior faculty member and walking her through the NSF GPG or should I attend the meeting with the internal auditor who is trying to convince the provost that all payments to faculty from grant funds should be disallowed immediately? Should I read through the second draft of a faculty member’s Fulbright-Hays grant application or should I meet with the vice president to explain what an allegation of scholarly misconduct really means to the institution?

I was at a meeting recently with sponsored programs staff from other institutions—the majority from research or medical schools. Someone in the audience asked what role a sponsored research office plays in faculty development and development of proposals. Most of people agreed that they play a minor or insignificant role in that area. Nothing could be further from the truth at a PUI. Our faculty members have chosen to work at our institutions usually because of the importance PUIs place on undergraduate instruction. Because of this non-research focus, they are not, for the most part, well-versed in proposal development.

Being effective in my job entails time spent getting to know individual faculty and their research interests, meeting with them and providing proposal writing assistance which might include getting them in touch with the appropriate program officer in Washington, D.C. or helping them navigate through an RFP. Individual meetings and multiple revisions to narratives and budgets take a lot of time, but establishing a positive working relationship with the faculty member is essential at a PUI. It builds trust which can save me considerable time in the future. I am fortunate to have staff in my office so that even if I can’t devote more of my time working one-on-one with the faculty I have someone else who can.

Unlike my counterparts at research intensive institutions I spend an inordinate amount of time trying to communicate the uniqueness of sponsored funding—that these grants and contracts sometimes require special decision making. Because our offices are not a central focus on campus there are many people who don’t know what it is we do or why we exist. Some people think we write grants, some people think we raise money, some people think we are just here to pad the faculty members’ salaries and others see as merely a regulatory roadblock to their research. It is imperative that I, as the Director of the Office of Sponsored Projects at a PUI, communicate with the rest of the campus about what we do and about the very different

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1 This article is reprinted from the NCURA Magazine, Vol. XL, No. 5, December 2008/January 2009, published by the National Council of University Research Administrators. It is used with permission of the publisher. Beth Seaton is director of sponsored programs at Western Illinois University.
nature of sponsored awards. This effort can include explaining facilities and administrative cost recovery to the new vice provost for research and graduate studies, the importance of a cost transfer policy to the accounting clerk, or the concepts of “reasonable,” “consistent,” and “allocable” to the department secretary who is, for the first time, in charge of federal grant expenditures.

Cultivating relationships across campus to facilitate this process is very time-consuming, but again, essential. Taking the time to talk to the person in the budget office about why the faculty member is getting salary from a grant account, or to the Board of Trustees about the recommended changes to the intellectual property policy, or to the purchasing office about why an agreement is being negotiated after the activities have already begun facilitates the processing of transactions on sponsored awards. Because some sponsored activities occur so infrequently, they have to be literally walked through the systems to ensure approval and completion. Having developed a personal level of trust through relationships in the deans’ offices, payroll, purchasing, human resources, etc. goes a long way when I need to get something accomplished quickly.

Working in the sponsored projects area at a PUI is challenging in that we are required to comply with all of the same regulations as the well-funded research intensive institutions. The time required to draft and adopt policies on conflict of interest, scientific misconduct, human and animal subjects, biosafety, etc. is the same whether you receive $5 million in sponsored awards or $500 million. This is where I can really rely on the relationships we have established through NCURA membership to help. If we don’t have a policy on export controls, instead of spending countless hours researching the topic I can contact an NCURA member who deals with that issue on a daily basis for some advice. I rely on my NCURA colleagues to help me navigate through a lot of issues that may come up very infrequently at a PUI, thereby saving me a lot of time.

We need to remember that when we are working on cultivating relationships with other offices on campus, with the upper administration, with the faculty, and with others in NCURA, we are building a network of people who understand our needs better and who can help us save time in the future. This can mean more time for that one-on-one work with the faculty.
Universities Swap Ideas for Meeting NSF, NIH RCR Training Mandates
Report on Research Compliance

Predominantly undergraduate institutions may have only a few students who work on grants that fall under the National Science Foundation requirement for training in the responsible conduct of research and, perhaps, none at all who fall under NIH’s training mandate. Comprehensive universities may have many researchers who already receive training as required by certain NIH grants; they, too, face the NSF requirement.

“Many of the PUIs don’t have training set up, nor do they constantly have funded projects by the NSF and NIH, and it is up to them to provide training as they see fit,” said Linda Mason, coordinator of grantsmanship for the Oklahoma State Regents, whose system includes two comprehensive universities and 23 PUIs.

Mason moderated a podcast on this topic sponsored by the National Council of University Research Administrators. She was joined by Bob Holm, director of the Institute for Research and Scholarship at Butler University in Indianapolis, a PUI, and Megan Losh, associate director of the Research Ethics, Education and Policy office at Indiana University, which is part of IU’s Office of Research Administration. Together they shared compliance strategies they have used in meeting the training requirements of both NSF and NIH.

Training Requirements Differ

The American COMPETES Act required the NSF director to mandate “that each institution that applies for financial assistance from the foundation for science and engineering describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.” This requirement, which went into effect in January, does not specify the type of training or a preferred format. NSF leaves it up to the institution to determine the format of training, whether online, in-person, or some combination.

NIH’s training requirement applies to “all NIH institutional research training grants, individual fellowship awards, career development awards (institutional and individual), research education grants, dissertation research grants, or other grant programs with a training component that requires instruction in responsible conduct of research as noted in the funding opportunity announcement.” At least eight hours of training is required, to cover a variety of topics, including conflict of interest, research misconduct, human subjects protections and “responsible authorship and publication.”

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1 This article is reprinted from the April 2011 issue of Report on Research Compliance. For further information, visit www.reportonresearchcompliance.com.
In addition, the NIH training cannot be solely online and should involve mentoring by faculty. As NIH stated in a November 2009 update to its RCR training policy, “While online courses can be a valuable supplement to instruction in responsible conduct of research (RCR), online instruction is not considered adequate as the sole means of instruction. A plan that employs only online coursework for instruction in responsible conduct of research will not be considered acceptable, except in special instances,” which NIH describes. (For more information, see http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html.)

CITI Programs Form the Foundation
Holm said that Butler is “developing our RCR program on two parallel tracks that in the very immediate future will intersect and become one.” Further, “One of the tracks is that we have drafted an RCR policy for the university that involves an integrity officer,” she added. “This is in response to any type of allegation of irresponsible conduct of research, such as data manipulation, plagiarism [and] falsification of data.” This policy will be in place after a review by a committee of the Butler faculty senate and then the full senate. It will be shared with Butler’s board of trustees as well, said Holm, who noted that he had recently been named Butler’s integrity officer.

The second “track” actually has two components. One, Butler is a fairly recent subscriber to the Collaborative Institutional Training Initiative. CITI is a suite of online classes and training modules that can be used by undergraduates as well as faculty. “We had a group of undergraduate students take the RCR modules last summer, and [they] did very, very well and didn’t really have many negative reactions to us asking them to do this; this was kind of our first test group to do that,” Holm said.

Second, “We will also be working with faculty to develop a mentoring philosophy amongst them and their undergraduate students,” Holm said, adding that as a PUI, “we don’t have any graduate students per se that are doing any kind of research.” Butler has a couple of post-doctoral students in its College of Pharmacy, he said. “For those students that are associated with a faculty member that is funded by or going to be funded by NSF or NIH, we would encourage and monitor the mentoring that the faculty member gives to the undergraduate student in his or her laboratory,” Holm said.

NIH awards are infrequent at his university, he added. But should one be received, Butler would comply with the requirements and “do the additional amount of training in terms of the faculty mentoring for the undergraduate student in their laboratory,” Holm said. “And then our office would be responsible for monitoring and recording all the information in terms of time spent by each of the faculty researchers mentoring their students.”

IU Is Building on Existing Policy
Losh described a similar process under way, and now partly operational, at IU. “We already have a policy on research misconduct, and that’s been in place for a while,”
Losh said. IU also uses the CITI modules for online training. But the NIH requirement states that training cannot be limited to just online courses, so, to fulfill this portion, researchers and students are also attending on-campus classes on research ethics, Losh said.

“We do offer training sessions and some for-credit classes that cover the topics of RCR,” Losh said. “So the principle investigator can send the students to those classes as well.” Ensuring and documenting that students and faculty take the required training are key, and IU has a process in place to do just that.

“Our office is the one that does document what they’re doing,” she said. “And what we are going to be doing is sending out a request to the researchers that have the specific grants … two times a year, every six months, asking them to document what have they done in addition to the CITI training. We are able to log into the CITI training and see who’s paid off a grant, specific for NIH and NSF, and if they have taken CITI. If they have not, we notify the researcher and say, ‘Look, you need to have this person take CITI as well.’”

PIs will be asked what topics were covered, how long the training took, and what form it was in, Losh said. “There might be a lot of different types of training that the researcher does,” Losh added. “There might be a laboratory meeting, or it could be more of a session where you have somebody come in and talk to the whole group,” she said, and IU wants to be able to capture these events.

“We work really closely with the researchers, and find out what they’re doing in their classes or with their post-docs, people who are paid off the grant. If there is a PI on the NIH grant, we try to find out what they are doing and document it,” she said. Thus far, classes are held only on the Indianapolis and Bloomington campuses. “Our goal in the next year or so is to reach out to all the other campuses within the IU system and put on classes for them as well,” Losh said.

Losh said that the training program IU utilizes for NIH compliance would also be adequate for meeting the NSF mandate, “as long as there is an understanding between the PI and the institution as to what does that mean for their specific grant.”

Oklahoma Regents Will Help PUIs

Mason spoke from the perspective of a statewide system, saying, “We are now working on a collaborative response to the [RCR requirement] that will be available to all of the 23 PUIs and maybe other private institutions that want to join this response.”

“We are developing a model that is based on the University of Oklahoma model at the Norman campus,” Mason said. “Their model has been funded by NSF and NIH and is a response to the requirements of both of those agencies, and they provide training only for their graduate students. Their undergraduate students are provided training on an individual mentoring basis.”

The Norman campus previously used CITI modules, “but they have since developed this on-campus training model,” she said, which is two eight-hour days of training, typically on a Friday and Saturday. The classes are noncredit, Mason said,
and offered at the end of every month. Some 1,500 graduate students annually participate in the training. “They require all of their paid graduate students to take the training regardless of their source of pay,” Mason said. The training is a “case-based model,” meaning it is tailored to the student’s area of study.

“They have the students look at written cases, video clips of cases, and then they do some role-playing to establish a discussion about what would be the ethical conduct of research based on standards … for each of the student’s backgrounds,” Mason said. “For example, if they are from fine arts, they look at fine arts standards of ethical conduct, and if they are engineering, they look at the engineering and so on [for] different schools.”

Mason said the regents will use the Oklahoma University’s case study materials and will provide training in one central location, perhaps at the regents’ facilities in Oklahoma City, which she and faculty members from the PUIs will teach researchers. “We think that [institutions working together] is an important part of the training so that the students can interact with each other from different campuses. And the campuses and the universities will determine which of their students will go through this training, depending on their grants on campus or their policy on campus,” Mason said.

A second part of the training, which will be “back on [each] campus,” is still in development, Mason said “I will work with each of the campus-sponsored program directors to develop a customized, individualized response for the faculty members who are conducting research on the campus to provide a second component,” she said.

In addition, “On a statewide level, we are going to have all the principal investigators, and the researchers who may not have an active grant but do have student research[ers], take the ‘train the trainer’ workshop,” which is also offered by Oklahoma University, Mason said. Mason also noted that she is available to PUI staff “at any time” and can provide individualized instruction to PIs.

**Training for All?**

Mason and Holm also said they felt strongly that all students — irrespective of their research duties — should receive some training in ethical conduct, saying to provide such training would be “ideal.” Holm pointed out that students may run into issues of plagiarism and other related concerns regardless of whether they are conducting research. Mason said her system also sees value in this idea.

“We’re engaging in discussions of having everybody receive training, all students, not just all researching students, but all students….because it’s a valuable thing to do for students in their academic pursuits,” she said.

**Link to Butler Institute of Research and Scholarship:** www.butler.edu/birs.

**Link to IU Research, Ethics, Education & Policy office:** www.researchadmin.iu.edu/reep.html.

2320.7 Faculty Perceptions of Research, Scholarly, and Creative Activity and Grant Seeking at a Predominantly Undergraduate Institution

Cynthia E. Carr and Joseph C. McNicholas, Loyola Marymount University; and Robert R. Miller, Miller & Associates

Sponsored projects offices at institutions of higher education are responsible for encouraging and assisting faculty as they work to acquire grant funding for research, scholarly and creative activity (RSCA). External funding can allow faculty to pursue more extensive research projects because it can bring faculty release time, equipment, travel funds, and professional assistance (for example, data analysis, or program management). Grant funding can also enhance the institution by contributing to indirect or facilities and administrative costs (F&A), bringing a new income stream into the institution (Cole, 2007). Predominantly undergraduate institutions (PUIs) are the teaching engines of U.S. higher education. By its very nature, the sponsored projects office in the predominantly undergraduate environment represents an on-the-ground institutional commitment to research through pre-proposal assistance, and tends to build closer and more collaborative relationships with faculty than similar offices in research universities (Pogatschnik, 2008). Lowry and Hansen (2001) suggested that the role of sponsored projects offices at PUIs should encompass the institutional integration of research and teaching, a proposition fraught with policy issues, historical biases, and personnel considerations:

Whether by conscious intent or by acquiescence to an imitative model inherited from doctoral institutions, research administration offices perpetuate old divisions between teaching and research. The end result is that we contribute to conflict and mixed signals both within the university and with agencies external to it (Lowry & Hansen, 2001, p. 12).

These offices at PUIs sometimes increase tension among faculty by increasing the institutional resources allocated to research administration activities (pre-award activities, accounting, compliance, etc.), and therefore away from teaching activities. Another source of tension can emerge because externally funded research may not be critical to processes of tenure and promotion at PUIs. It is beyond the scope of this study to suggest the proper purview of sponsored projects offices at all PUIs, except to note that each office might serve best by becoming aware of the interests and needs of its own faculty and addressing them. Many sponsored projects offices attempt to do this by conducting faculty surveys.

Boyer and Cockriel (1998) conducted a survey of College of Education faculty at Association of American Universities (AAU) Research I institutions to explore barriers and motivating factors in grant seeking. Results reflected the nature of these research institutions: the greatest motivations included promotion and tenure, the building of professional reputation, and the commitment of the institution’s presi-

1 This article is reprinted from Research Management Review, Volume 17, Number 1, Fall/Winter 2009. It is used with permission of the publisher.
dent to grant seeking. Barriers included lack of training in the grants process, lack of understanding of budgeting, and unfamiliarity with funding sources. These results from research universities differ from the most cited common barrier for PUIs: the lack of time.

In their 2008 study of perceptions of female associate professors toward the barriers to and supports of grant writing at Boise State University, Idaho State University, and the University of Idaho, Easterly and Pemberton (2008) found that top institutional barriers included a heavy teaching load, heavy committee assignments, or a lack of key resources, including: knowledge of funding sources, peer networks, and travel funds to attend conferences. Personal barriers included perceived lack of training and lack of mentors. Respondents felt that their institutions strongly supported their efforts; however, they were not always aware of the services provided by the grants office. Based on their data, Easterly and Pemberton pointed out that although strong support may exist at an institution, faculty must know about services in order to use them.

In 1995, Dooley investigated a shift in institutional culture toward increased grant-funded research at the College of Education at Texas A&M. Texas A&M is a research-intensive university; however, up until the period studied, the College of Education had emphasized teaching, and so processes examined by Dooley are similar to those of PUIs. Dooley identified barriers and incentives to grant writing, and found that a primary consideration of Texas A&M College of Education faculty was acquiring sufficient time to prepare the proposal and conduct the award. Barriers included heavy teaching and advising loads, as well as receiving relevant information too late to prepare a competitive proposal. The top services provided by the local grants office included information on how to create a budget, search for opportunities, and prepare the necessary documents for administrative approval of the submission.

Sterner (1999) conducted a survey of tenured and tenure-track faculty at Bradley University, a PUI, to measure attitudes toward RSCA and teaching. She found that while faculty emphasize teaching over research, they also strongly value the effect of RSCA on their professional development, on the quality of instruction and on excellence in teaching. Faculty at Bradley believe that external funding activities are considered in the tenure and promotion process.

The Office of Sponsored Programs at California State University at Chico conducts regular assessments of faculty needs (LeBlanc, Jackson, & Wright, 2003). In 2001–2002, the assessment concentrated on perception of the teacher-scholar model in an institution that has seen great change from a strong teaching mission to growing emphasis on scholarship. The authors found that deans, department chairs, and new tenure-track faculty agree on a conceptual level that colleges and departments encourage faculty to seek external funding to pursue RSCA and that the pursuit of external funding contributes to professional growth, and tenure and promotion. Results on grant-seeking behaviors were different, however:

University leadership also espouses the benefits of the teacher-scholar model. But the majority of department chairs—the gatekeepers
of the retention, tenure and promotion process and, typically, members of the senior faculty—disagree over the significance of seeking and obtaining external funding as well as whether it is legitimate to equate the pursuit of external funding with doing research (LeBlanc, Jackson, & Wright, 2003, p. 28).

**Background**

Loyola Marymount University (LMU) is a PUI and four-year, private, comprehensive Master’s I, Catholic institution sponsored by the Society of Jesus (Jesuits) and the Religious of the Sacred Heart of Mary. LMU was established in Los Angeles, California in 1911, and had a 2008 enrollment of 5,667 undergraduates and 3,205 graduate students, including the students of Loyola Law School. The student-to-faculty ratio is 11:1.

LMU faculty have historically shared a fundamental interest in pedagogy, as reflected in the mission, goals, and objectives of the institution, and throughout the *Faculty Handbook* where teaching is always listed before scholarship. The *Handbook* sets teaching and advising as the first Specific Faculty Responsibility:

> Excellent teaching is central to the University’s mission and rooted in the traditions of the founding religious orders. The faculty member plays a vital role in carrying out the mission of the University by challenging and encouraging students to become life-long learners (Loyola Marymount University, 2009, p. I-22).

In recent years, LMU has increasingly emphasized the importance of faculty engagement in externally funded research projects by increasing support services through the development of the administrative lattice, as Massy might put it (Massy, 2003). In 2007, a Vice President for Research was hired, and the Office for Research and Sponsored Projects (ORSP), a primarily pre-awards office, was augmented by the hiring of two additional positions: an Executive Director for Research and Compliance and an additional pre-award administrator. This increase in resources devoted to research has resulted in a near tripling of awards, from $2.3 million in 2004 to $6.5 million in 2009.

**Purpose**

The development of this research infrastructure has been welcomed by most faculty at LMU. Nevertheless, ORSP staff is cognizant of the fact that an increased emphasis on research may occasion tensions regarding the tenure process, as well as faculty responsibilities as instructors and scholars. Three themes recurred:

1. Some faculty felt that external funding might not be important to faculty careers.
2. Others thought that the pursuit of external funding did not seem to be recognized in the tenure process.
3. Another group of faculty wondered whether there was assistance on campus for the pursuit of external funding.

ORSP staff were interested in knowing more about the prevalence of these
views, and, if necessary, how the institution should address them. Therefore, in 2009 two of the authors, members of the ORSP staff, conducted a survey self-report to measure faculty perceptions of: (1) the relationship of RSCA to the pursuit of external funding; (2) the importance of the pursuit of external funding to the tenure process and career development; and (3) the perceptions of faculty regarding ORSP outreach and service.

**Methodology**

The authors began preparing the survey instrument in summer 2008, and guided it through several iterations and a pilot study. RSCA questions were based in part on the Sterner (1999) study of faculty attitudes toward external grant seeking. Other questions were developed based on ORSP management experience, and in conjunction with faculty, administrators, the Director for Institutional Assessment, and the LMU Research Council over a six-month period of preparation. IRB approval was granted in 2008. Administration of the survey was delayed twice due to institutional concerns about faculty survey fatigue, and it was finally deployed in fall 2009.

The final survey consisted of 24 items, including four demographic questions, five questions on RSCA and tenure, four questions on the effectiveness of ORSP outreach, and seven questions on the effectiveness of ORSP service.

Quantitative data were gathered using a 5-point Likert scale: (1) Strongly Agree, (2) Agree, (3) I don’t know, (4) Disagree, and (5) Strongly Disagree. “I don’t know” was included to offer a neutral response or to indicate lack of knowledge.

For purposes of survey distribution, LMU tenured and tenure-track faculty members were divided into two groups. The first included those who had worked with the ORSP to submit a grant proposal at least once during the previous 27 months (July 15, 2007–November 1, 2009), a total of 140. This group will be referred to as the “client” group. The Vice President of Research and Dean of Graduate Programs emailed an invitation to this group that included a link to the survey, housed on Survey Monkey: www.surveymonkey.com. They received two reminders in one-week increments.

The second group consisted of 100 faculty members selected randomly from the remaining group of 265 tenured and tenure-track faculty members, provided by the Office of Institutional Research. This group will be referred to as the “nonclient” group. One week after the invitation was sent to the first group, the second group was similarly invited by email to participate, provided with a separate link to the same survey housed on Survey Monkey, and reminded twice, in one-week increments. The two links to the survey were each kept live for four weeks and then the survey was closed.

**Results**

Most academics believe that research begets good teaching and that good teaching begets educational quality (Massy, 2003, p. 87)

Of the 240 faculty members approached, 136 tenured and tenure-track faculty members responded, 87 clients, or 60.8%, and 49 nonclients, or 33%—altogether, a 56.7%
return. Three nontenure-track ORSP client faculty also responded and are included in the results. Sixty-three percent of respondents were male, and 38% were female. Fifty-nine participants (42.4%) were from the College of Liberal Arts, and 40 (28.8%) were from the College of Science and Engineering, with the rest distributed between 4% and 9% among the School of Film and Television, the School of Education, the College of Communication and Fine Arts, and the College of Business Administration. Loyola Law School professors were not approached for this survey.

**Research, Scholarly and Creative Activity at LMU**

In keeping with presumed faculty interest in the ties between teaching and RSCA at LMU, the survey responses to Questions 5a, 5b, and 5c, adapted from Sterner (1999), reflect these concerns. Given LMU’s strong mission-centered impetus toward teaching and the drive toward research that currently permeates higher education, LMU faculty seem amenable to the kind of teaching-research fusion espoused by such thinkers as Boyer in *Scholarship Reconsidered* (Boyer, 1990). Figure 2320.7-1 shows survey respondents had high rates of agreement with statements that reflect the value of RSCA to the quality of instruction (91%), excellence in teaching (77.4%), and remaining current in their disciplines (97.8%). One might expect that ORSP client faculty, who had applied for grants sometime during the two years preceding this study, would express more agreement with the positive aspects of RSCA. When disaggregated into client and nonclient groups (Figure 2320.7-2), however, there was somewhat less agreement on the value of RSCA relative to excellence in teaching (form or pedagogy) or the quality of instruction (content). Responses by nonclient faculty reflected higher rates of agreement with the connection between RSCA and quality of instruction and excellence in teaching than client faculty.

These data suggest that the perception of respondents on the importance of RSCA for teaching and instruction does not necessarily indicate that the pursuit of external funding for research at LMU is a highly valued activity. Most faculty at LMU see the importance of RSCA as it reflects on their daily teaching duties, and all see it as important to remaining conversant with trends in their disciplines; however, this does not necessarily result in grant-seeking behavior. Faculty members’ positive valuation of grant seeking, coupled with a relatively low grant proposal preparation behavior (34.5%), may be caused by time considerations—a primary barrier to grant seeking at PUIs, according to the literature. Another possible factor is that not all RSCA is easily funded by external sources, such as the scholarly activities of liberal arts faculty—however, this hypothesis calls for further study.
Figure 2320.7.1: Total Number of All Responses to Survey Questions 5a, 5b, and 5c. Frequencies of Importance Ratings of RSCA to Aspects of Teaching

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>I Don't Know</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>5a. RSCA contributes toward quality of instruction.</td>
<td>86 (64.7%)</td>
<td>35 (26.3%)</td>
<td>7 (5.3%)</td>
<td>4 (3%)</td>
<td>1 (.8%)</td>
</tr>
<tr>
<td>5b. RSCA helps faculty members attain excellence in teaching.</td>
<td>64 (48.1%)</td>
<td>39 (29.3%)</td>
<td>15 (11.3%)</td>
<td>14 (10.5%)</td>
<td>1 (.8%)</td>
</tr>
<tr>
<td>5c. RSCA helps faculty members remain current in their disciplines.</td>
<td>100 (75.8%)</td>
<td>19 (22%)</td>
<td>3 (2.3%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

91% Agreement

77.4% Agreement

97.8% Agreement

Figure 2320.7-2: Comparison of Number of Strongly Agree and Agree Responses to Survey Questions 5a, 5b, and 5c by ORSP Clients’ and Nonclients’ Agreement Rates on the Nature of RSCA

<table>
<thead>
<tr>
<th></th>
<th>ORSP Client Faculty</th>
<th>ORSP Nonclient Faculty</th>
<th>Total Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>5a. RSCA contributes toward quality of instruction.</td>
<td>73 (87.9%)</td>
<td>41 (95.3%)</td>
<td>121 (91%)</td>
</tr>
<tr>
<td>5b. RSCA helps faculty members attain excellence in teaching.</td>
<td>61 (73.5%)</td>
<td>36 (83.7%)</td>
<td>103 (77.4%)</td>
</tr>
<tr>
<td>5c. RSCA helps faculty members remain current in their disciplines.</td>
<td>82 (100%)</td>
<td>43 (100%)</td>
<td>119 (97.8%)</td>
</tr>
</tbody>
</table>

Pursuing Grants at LMU

Most survey respondents (79.4%) reported that tenure expectations are clearly articulated, as shown in Figure 2320.7-3. A small percent reported that they either did not know whether tenure expectations were clearly articulated (5.3%), or disagreed with the statement (15.3%). Despite this indication that they understand tenure expectations, only 53.4% of respondents strongly agreed or agreed that the pursuit of externally-funded projects is recognized in the tenure process (Figure 2320.7-4); about 13% of respondents expressed uncertainty (I Don’t Know). ORSP client faculty were more likely to report that the pursuit of grants is recognized in the tenure process (57.9%) than nonclient faculty (51.1%). Further, ORSP nonclients were much more likely than ORSP client faculty (39.5% versus 28.9%) to disagree with this statement, perceiving that the pursuit of external funding is not recognized in the tenure process.

Figure 2320.7-5 demonstrates that LMU ORSP clients are much more likely to consider grant writing important to their career advancement and professional growth than nonclients (69.3% versus 46.5%), and this may be an important motivating factor. Nearly as many nonclients (41.9%) reported that writing grants is not important to them in terms of career advancement and professional growth.
Figure 2320-7.3: Comparison of All Responses to Survey Question 6 by ORSP Clients and Nonclients.
Question 6: Tenure expectations are clearly articulated to faculty in my department.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>I Don’t Know</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORSP Clients</td>
<td>27 (32.9%)</td>
<td>38 (46.3%)</td>
<td>4 (4.9%)</td>
<td>9 (11%)</td>
<td>4 (4.9%)</td>
</tr>
<tr>
<td></td>
<td><strong>79.2% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>15.9% Disagreement</strong></td>
</tr>
<tr>
<td>ORSP Nonclients</td>
<td>17 (40.5%)</td>
<td>19 (45.2%)</td>
<td>1 (2.4%)</td>
<td>4 (9.5%)</td>
<td>1 (2.4%)</td>
</tr>
<tr>
<td></td>
<td><strong>85.7% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>11.9% Disagreement</strong></td>
</tr>
<tr>
<td>Total Population</td>
<td>44 (33.6%)</td>
<td>60 (45.8%)</td>
<td>7 (5.3%)</td>
<td>15 (11.5%)</td>
<td>5 (3.8%)</td>
</tr>
<tr>
<td></td>
<td><strong>79.4% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>15.3% Disagreement</strong></td>
</tr>
</tbody>
</table>

Figure 2320-7.4: Comparison of All Responses to Survey Question 7 by ORSP Clients and Nonclients.
Question 7: In my opinion, the pursuit of external funding for research, scholarly and creative activity is recognized in the tenure process in my department.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>I Don’t Know</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORSP Clients</td>
<td>15 (8.8%)</td>
<td>30 (37.5%)</td>
<td>11 (13.8%)</td>
<td>22 (27.5%)</td>
<td>2 (2.5%)</td>
</tr>
<tr>
<td></td>
<td><strong>56.3% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>30% Disagreement</strong></td>
</tr>
<tr>
<td>ORSP Nonclients</td>
<td>7 (16.3%)</td>
<td>15 (34.9%)</td>
<td>5 (11.6%)</td>
<td>12 (27.9%)</td>
<td>4 (9.3%)</td>
</tr>
<tr>
<td></td>
<td><strong>51.1% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>39.5% Disagreement</strong></td>
</tr>
<tr>
<td>Total Population</td>
<td>23 (17.3%)</td>
<td>48 (36.1%)</td>
<td>18 (13.5%)</td>
<td>35 (26.3%)</td>
<td>9 (6.8%)</td>
</tr>
<tr>
<td></td>
<td><strong>53.4% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>33.1% Disagreement</strong></td>
</tr>
</tbody>
</table>

Figure 2320-7.5: Comparison of All Responses to Survey Question 8 by ORSP Clients and Nonclients.
Question 8: Writing grants is important to me in terms of career advancement and professional growth.

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>I Don’t Know</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORSP Clients</td>
<td>28 (31.3%)</td>
<td>33 (37.5%)</td>
<td>7 (8%)</td>
<td>15 (17%)</td>
<td>5 (5.7%)</td>
</tr>
<tr>
<td></td>
<td><strong>69.3% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>22.7% Disagreement</strong></td>
</tr>
<tr>
<td>ORSP Nonclients</td>
<td>10 (23.3%)</td>
<td>10 (23.3%)</td>
<td>5 (11.6%)</td>
<td>13 (30.2%)</td>
<td>5 (11.6%)</td>
</tr>
<tr>
<td></td>
<td><strong>46.5% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>41.9% Disagreement</strong></td>
</tr>
<tr>
<td>Total Population</td>
<td>38 (29%)</td>
<td>43 (32.8%)</td>
<td>12 (9.2%)</td>
<td>28 (21.4%)</td>
<td>10 (7.6%)</td>
</tr>
<tr>
<td></td>
<td><strong>61.8% Agreement</strong></td>
<td></td>
<td></td>
<td></td>
<td><strong>29% Disagreement</strong></td>
</tr>
</tbody>
</table>

**ORSP Outreach and Services**

As members of a service-oriented office, LMU ORSP staff are extremely interested in feedback on performance. Consequently, survey questions in this section were chosen with great care (Figure 2320-7-6). Questions were based on: samples uncovered during our literature review (Question 11, source of grants assistance); recent changes to ORSP services (Question 12, updated website); and current ORSP service
standards (Question 15, clear submission procedures, and Question 16, validation of assistance). Questions 14, 19, and 20 represent variations intended to ascertain satisfaction with services overall. Results from Question 11 indicate that general outreach efforts, which were expanded in 2008, have been successful, with 90% of faculty indicating they know to call ORSP regarding their grant and contract projects. This result is very positive given Easterly and Pemberton’s (2008) conclusion about the importance of faculty awareness of services. The LMU ORSP website (Question 12), which was recently revised (2008) to present a wide range of materials to assist with proposal development, was relatively unknown, with 38.2% of faculty agreeing that the website is helpful, and 44.3% of faculty unfamiliar with it.

Questions 14–20 brought generally good marks for the office, with a decisive majority of faculty reporting that they had excellent experiences working with the ORSP (69.9%), that submission procedures are clear (61.7%), that questions are answered (79.4%) that the staff is helpful in the submission process (72.8%), that they are treated with courtesy (90.3%), that they look forward to working with the office again (66.3%), and that they would recommend the ORSP to colleagues (72.6%).

All in all, there was satisfaction with these results, as well as suggestions for improvement.

**Figure 2320-7.6: Comparison of All Responses to Questions 11–20 Describing Knowledge and Attitudes of ORSP Clients to ORSP Services**

<table>
<thead>
<tr>
<th>Question</th>
<th>Agree</th>
<th>I Don’t Know</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11. If I had an idea for a grant proposal that I would like to submit to a federal or state agency, foundation, corporation, or professional or scholarly association, I would know what office to call on campus for help. (Includes nonclient responses.)</td>
<td>90%</td>
<td>3.8%</td>
<td>6.2%</td>
</tr>
<tr>
<td>12. The website of the Office for Research and Sponsored Projects is very helpful. (Includes nonclient responses.)</td>
<td>38.2%</td>
<td>44.3%</td>
<td>17.5%</td>
</tr>
<tr>
<td>14. I had an excellent experience working with the Office for Research and Sponsored Projects (or Academic Grants Office).</td>
<td>69.9%</td>
<td>8.6%</td>
<td>21.5%</td>
</tr>
<tr>
<td>15. The procedures for submitting a grant proposal were clear to me.</td>
<td>61.7%</td>
<td>13.2%</td>
<td>19.8%</td>
</tr>
<tr>
<td>16. The staff member(s) I worked with made sure my questions were answered.</td>
<td>79.4%</td>
<td>5.4%</td>
<td>15.3%</td>
</tr>
<tr>
<td>17. The staff member(s) I worked with was/were helpful in the grant preparation process.</td>
<td>72.8%</td>
<td>10.9%</td>
<td>16.3%</td>
</tr>
<tr>
<td>18. The staff member(s) I worked with exhibited professional courtesy.</td>
<td>90.3%</td>
<td>4.3%</td>
<td>5.4%</td>
</tr>
<tr>
<td>19. I look forward to working with the ORSP again on other projects.</td>
<td>66.3%</td>
<td>17.4%</td>
<td>16.3%</td>
</tr>
<tr>
<td>20. I would recommend the LMU ORSP to other faculty members for assistance with a grant.</td>
<td>72.6%</td>
<td>13.2%</td>
<td>14.3%</td>
</tr>
</tbody>
</table>

*Aggregated Agree and Strongly Agree
**Aggregated Disagree and Strongly Disagree

**Statistical Analysis**

A MANOVA was performed to examine differences between the colleges and schools on level of agreement ratings concerning the following questions:

5b. RSCA helps University faculty members attain excellence in teaching.

6. Tenure expectations are clearly articulated to faculty in my department.
7. In my opinion, the pursuit of external funding for RSCA is recognized in the tenure process in my department.

8. Writing grants is important to me in terms of career advancement and professional growth.

16. The staff member(s) I worked with made sure my questions were answered.

17. The staff member(s) I worked with was/were helpful in the grant preparation process.

20. I would recommend the LMU ORSP to other faculty members for assistance with a grant.

The homogeneity of variance assumption was not met for several of these dependent variables (Levene’s test, \( p < .05 \) for all). A natural log transformation was performed on each of the seven dependent variables and the assumption was satisfied for each of the variables (\( p > .25 \) for all). Faculty at different colleges and schools in the University were compared on level of agreement ratings regarding the dependent variables, including faculty at the College of Liberal Arts (\( n = 34 \)), the College of Science and Engineering (\( n = 31 \)), and other colleges and schools (\( n = 20 \); \( N = 85 \)). Using Pillai’s trace, there was a significant overall multivariate test (\( V = 0.60, F(14, 154) = 4.68, p < .001 \), partial \( \eta^2 = .30 \)). This finding indicates a significant effect of college and school on level of agreement ratings regarding the dependent variables.

Subsequent univariate ANOVAs revealed a significant effect of college/school on level of agreement ratings concerning three of the dependent variables:

5b. RSCA helps University faculty members attain excellence in teaching, \( F(2, 82) = 5.27, p < .01 \), partial \( \eta^2 = .11 \);

6. Tenure expectations are clearly articulated to faculty in my department, \( F(2, 82) = 12.97, p < .001 \), partial \( \eta^2 = .24 \);

7. In my opinion, the pursuit of external funding for RSCA is recognized in the tenure process in my department, \( F(2, 82) = 9.32, p < .001 \), partial \( \eta^2 = .19 \).

Univariate ANOVAs regarding the remaining dependent variables were not significant (\( p > .10 \) for all).

Further analyses were conducted to understand the significant findings. For level of agreement ratings concerning 6. Tenure expectations are clearly articulated to faculty in my department dependent variable, post hoc Bonferroni comparisons of means indicated that faculty in the College of Liberal Arts (\( M = 1.79, SE = 0.16 \)) and the College of Science and Engineering (\( M = 1.74, SE = 0.17 \)) each demonstrated a significantly higher level of agreement than faculty in other colleges and schools at LMU (\( M = 3.15, SE = 0.21; p < .001 \) for all). Faculty in the College of Liberal Arts and the College of Science and Engineering did not significantly differ in their level of agreement ratings on this variable (\( p > .05 \)).

For level of agreement ratings regarding 5b. RSCA helps University faculty members attain excellence in teaching dependent variable, faculty in the College of Liberal Arts (\( M = 1.50, SE = 0.18 \)) demonstrated a significantly higher level of agreement
than faculty in the College of Science and Engineering ($M = 2.23, SE = 0.18; p < .01$). Faculty in neither of these colleges significantly differed in their level of agreement ratings on this variable compared to faculty in other colleges and schools in the University ($M = 1.80, SE = 0.23; p > .05$ for all).

For level of agreement ratings concerning 7. *In my opinion, the pursuit of external funding for RSCA is recognized in the tenure process in my department,* the dependent variable—faculty in the College of Science and Engineering ($M = 1.84, SE = 0.19$)—demonstrated a significantly higher level of agreement than faculty in the College of Liberal Arts ($M = 2.91, SE = 0.18; p < .001$) and faculty in other colleges and schools at LMU ($M = 2.85, SE = 0.24; p < .01$). Faculty in the College of Liberal Arts did not significantly differ in their level of agreement ratings on this variable compared to faculty in other colleges and schools in the University ($p > .05$).

Two multiple regression analyses were performed to investigate the relationship between faculty satisfaction in working with the ORSP and particular ORSP staff services. The first analysis measured faculty satisfaction according to level of agreement ratings regarding 14. *I had an excellent experience working with the ORSP.* The second analysis measured faculty satisfaction according to level of agreement ratings concerning 20. *I would recommend the LMU ORSP to other faculty members for assistance with a grant.* For both analyses, level of agreement ratings regarding particular ORSP staff services served as the set of predictor variables, and included:

11. *If I had an idea for a grant proposal that I would like to submit to a federal or state agency, foundation, corporation, or professional or scholarly association, I would know what office to call on campus for help;*

12. *The website of the ORSP is very helpful;*

15. *The procedures for submitting a grant proposal were clear to me;*

16. *The staff member(s) I worked with made sure my questions were answered;*

17. *The staff member(s) I worked with was/were helpful in the grant preparation process; and*

18. *The staff member(s) I worked with exhibited professional courtesy.*

The first analysis regressed level of agreement ratings concerning *14. I had an excellent experience working with the ORSP* on the six office services. The test of the overall model suggests a significant relationship between level of agreement ratings regarding *14. I had an excellent experience working with the ORSP* and office services ($F(6, 81) = 56.80, p < .001$). The multiple correlation was .90, indicating that approximately 81% of the variance in level of agreement ratings concerning *14. I had an excellent experience working with the ORSP* was accounted for by the linear combination of predictor variables. Regarding each of the predictor variables, level of agreement ratings concerning *17. The staff member(s) I worked with was/were helpful in the grant preparation process* and *15. The procedures for submitting a grant proposal were clear to me* were strong predictors of level of agreement ratings concerning *14. I had an excellent experience working with the ORSP.* Level of agreement ratings regarding *16. The staff member(s) I worked with made sure my questions were answered* was a moderate predictor. Each of the remaining predictor variables was a poor predictor.
presents the results of the first regression analysis.

The second analysis regressed level of agreement ratings concerning 20. *I would recommend the LMU ORSP to other faculty members for assistance with a grant* on the same six ORSP staff services. The test of the overall model suggests a significant relationship between level of agreement ratings regarding 20. *I would recommend the LMU ORSP to other faculty members for assistance with a grant* and office services ($F(6, 81) = 41.28, p < .001$). The multiple correlation was .87, indicating that approximately 75% of the variance in level of agreement ratings concerning 20. *I would recommend the LMU ORSP to other faculty members for assistance with a grant* was accounted for by the linear combination of predictor variables. With regard to each of the predictor variables, level of agreement ratings concerning 17. The staff member(s) I worked with was/were helpful in the grant preparation process and 16. The staff member(s) I worked with made sure my questions were answered were strong predictors of level of agreement ratings concerning 20. *I would recommend the LMU ORSP to other faculty members for assistance with a grant*. Each of the remaining predictor variables was a poor predictor. Figure 2320-7.8 presents the results of the second regression analysis.

According to collinearity statistics, multicollinearity was not a problem in the regression analyses since values for the VIF were not excessive.

**Figure 2320-7.7: Regression of Level of Agreement Ratings Concerning Faculty Having an Excellent Experience Working with the ORSP on the Six ORSP Staff Services: Regression Coefficients**

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>$SE$</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.28</td>
<td>0.22</td>
<td></td>
</tr>
<tr>
<td>11. If I had an idea for a grant proposal that I would like to submit to a federal or state agency, foundation, corporation, or professional or scholarly association, I would know what office to call on campus for help.</td>
<td>0.00</td>
<td>0.09</td>
<td>.00</td>
</tr>
<tr>
<td>12. The website of the Office for Research and Sponsored Projects is very helpful.</td>
<td>0.06</td>
<td>0.09</td>
<td>.04</td>
</tr>
<tr>
<td>16. The staff member(s) I worked with made sure my questions were answered.</td>
<td>0.28*</td>
<td>0.10</td>
<td>.25</td>
</tr>
<tr>
<td>17. The staff member(s) I worked with was/were helpful in the grant preparation process.</td>
<td>0.40**</td>
<td>0.10</td>
<td>.37</td>
</tr>
<tr>
<td>18. The staff member(s) I worked with exhibited professional courtesy.</td>
<td>-0.01</td>
<td>0.10</td>
<td>-.01</td>
</tr>
<tr>
<td>15. The procedures for submitting a grant proposal were clear to me.</td>
<td>0.42**</td>
<td>0.09</td>
<td>.36</td>
</tr>
</tbody>
</table>

Notes. $N = 88$; $R = .90$; $R^2 = .81$; Adj. $R^2 = .79$; *$p < .01$; **$p < .001$. 

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### Figure 2320-7.8: Regression of Level of Agreement Ratings Concerning Faculty Recommending the ORSP on the Six ORSP Staff Services: Regression Coefficients

<table>
<thead>
<tr>
<th>Variable</th>
<th>$B$</th>
<th>SE</th>
<th>$\beta$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>-0.48</td>
<td>0.24</td>
<td></td>
</tr>
<tr>
<td>11. If I had an idea for a grant proposal that I would like to submit to a federal or state agency, foundation, corporation, or professional or scholarly association, I would know what office to call on campus for help.</td>
<td>0.13</td>
<td>0.09</td>
<td>.08</td>
</tr>
<tr>
<td>12. The website of the Office for Research and Sponsored Projects is very helpful.</td>
<td>0.15</td>
<td>0.09</td>
<td>.11</td>
</tr>
<tr>
<td>16. The staff member(s) I worked with made sure my questions were answered.</td>
<td>0.34*</td>
<td>0.11</td>
<td>.31</td>
</tr>
<tr>
<td>17. The staff member(s) I worked with was/were helpful in the grant preparation process.</td>
<td>0.37*</td>
<td>0.11</td>
<td>.35</td>
</tr>
<tr>
<td>18. The staff member(s) I worked with exhibited professional courtesy.</td>
<td>0.13</td>
<td>0.11</td>
<td>.10</td>
</tr>
<tr>
<td>15. The procedures for submitting a grant proposal were clear to me.</td>
<td>0.12</td>
<td>0.10</td>
<td>.1</td>
</tr>
</tbody>
</table>

Notes. $N = 88$; $R = .87$; $R^2 = .75$; Adj. $R^2 = .74$; *$p < .05$; **$p < .01$.

### Discussion

The survey responses provide insights into the three areas of concern expressed by LMU faculty that provided the purpose for this study, as well as the pursuit of external funding for RSCA and its relevance to the teaching mission of LMU. The insights are not always those that might have been anticipated by faculty conversations, however.

1. **Some faculty felt that external funding might not be important to faculty careers.**

   *In fact, RSCA and external funding were reported as very important to many faculty careers.* Findings indicate that rates of LMU faculty agreement with statements regarding the importance of RSCA to teaching and keeping current in their disciplines are strong. Surprisingly, compared to ORSP client faculty, nonclient faculty were more likely to impute importance to RSCA for quality of instruction (95.3% vs. 87.9%) and to excellence in teaching (83.7% vs. 73.5%). Faculty recognition of the importance of RSCA to teaching, therefore, does not necessarily translate into increased production of proposals for external funding. This may be an important result for those interested in increasing proposal production at PUIs, especially in consideration of well-documented findings that for most faculty teaching and research are mutually exclusive activities (Fairweather, 2005). Faculty who report grant seeking important to their careers are more likely to engage in grant seeking behaviors as clients of the ORSP.

2. **Other faculty thought that the pursuit of external funding did not seem to be recognized in the tenure process.**

   *In fact, most faculty perceive that the pursuit of external funding is recognized in the tenure process.*
A majority of the faculty respondents (79.4%) felt that tenure expectations were articulated clearly, and ORSP client faculty were more likely than ORSP nonclients to consider the pursuit of external funding as important to the tenure process in their departments (57.9% vs. 51.5%). Nonclient faculty perceived that the pursuit of grant funding was not recognized at a much higher rate than ORSP client faculty (39.5% vs. 28.9%). ORSP clients were far more likely to report that grant seeking is important in terms of career development and professional growth (69.3% vs. 46.5%). This result suggests that tenure expectations may have an impact on whether faculty pursue external funding—another element of interest to those who seek to increase faculty grant-seeking at PUIs.

The College for Science and Engineering faculty respondents demonstrated significantly higher levels of agreement concerning 7. In my opinion, the pursuit of external funding for RSCA is recognized in the tenure process in my department, more than their colleagues from the College for Liberal Arts and faculty at other schools and colleges at LMU. This result corroborates the importance of the pursuit of grant funding in the sciences generally as scientific investigations tend to require resources and equipment which cannot be easily supplied by most universities. It is to be expected that acquiring external grant funding to support scientific investigations will often be important to completing research that leads to publications and this can lead to tenure and career advancement.

On the other hand, results show that faculty from the College of Liberal Arts are more likely to agree with 5b. RSCA helps University faculty members attain excellence in teaching. It is unclear whether this is due to more awareness of the development of the RSCA-teaching paradigm among liberal arts faculty generally (i.e., the Teacher-Scholar model), or whether the physical arrangement of the campus may have an impact. The LMU Center for Teaching Excellence, a strong proponent of the RSCA-teaching paradigm, is located in the same building as the College of Liberal Arts.

(3) Another group of faculty wondered whether there was assistance on campus for the pursuit of external funding.

In fact, the majority of the faculty members who have worked with the ORSP are satisfied with the services provided.

Despite the rather high degree of satisfaction shown with LMU ORSP services, only three of the six services were predictive of faculty agreement with the statement, 14. I had an excellent experience working with the ORSP. The assistance ORSP staff provided in submission, in making submission procedures clear, and answering questions regarding submissions seemed to make the difference to ORSP clients in their assessment of the office. This finding supports Campbell’s (1998) observations that active helping behaviors encourage faculty to engage in the submission of grant proposals. Despite the high rating faculty gave LMU ORSP staff for courtesy (90.3%), for example, this did not influence faculty satisfaction with the office. Further, to bring faculty members to the point of taking an active, positive step regarding the ORSP, that of recommending the office to a colleague, the predictors were more limited. Only 17. The staff member(s) I worked with was/were helpful in the grant preparation process and 16. The staff member(s) I worked with made sure my questions
were answered were predictive of a recommendation. The high multiple correlation in each regression analysis was not surprising, as it is likely that faculty satisfaction working with the ORSP is mostly affected by the quality of ORSP staff services that were represented by the set of predictor variables in each analysis. A concern of this study was whether substantial differences existed among these services in influencing faculty satisfaction.

These preliminary results have clear ramifications for the service orientation of the LMU ORSP, and perhaps for PUIs generally: active helping behaviors—in this case, assisting in grant preparation and answering questions about submission—are the services that matter to grant-seeking faculty at LMU. Making submission procedures clear is also helpful. Other factors, including courtesy and a service-oriented website, do not make a difference in terms of positive faculty estimation of service. Naturally, courtesy should still be an important part of service standards; however, we predict that courtesy will only be reflected in faculty estimation of excellence and recommendation if it were to drop below a certain (unknown) threshold. These results suggest that the primary objective of ORSP services should be actively assisting faculty with grant submissions in order to best serve their needs. However, this is a pilot study. Further investigation is warranted.

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The Transparent PUI Sponsored Programs Office: Building Trust with Faculty, and Gaining Support from Institutional Leaders

Kris Monahan, Wellesley College, and Anne Pascucci, Christopher Newport University

Transparency extends beyond seeing through physical objects and applies more metaphorically to seeing through processes, behaviors, or intentions. When used in a social context, transparency implies openness, communication, and accountability. While the federal government is working toward fiscal transparency of government funds, the concept of transparency can be applied to many other areas of our work. Research administrators at PUIs don’t develop, implement, and evaluate sponsored research policies, procedures, and systems of support in a vacuum – we seek feedback and advice from our stakeholders to ensure that their views are heard and their needs are met. This transparency is critical to the day-to-day operations of a PUI where a very small staff, perhaps even a solo professional, is the point of contact for all things sponsored research within an institution.

Strengthening relationships with faculty may very well be the most critical foundation in building transparency, creating a culture of communication, and enhancing an office’s operations and support to an institution. But where does the PUI research administrator begin to build relationships with faculty and to engage faculty in an office’s operations? Making the effort to gain an understanding of faculty perspectives, the challenges PIs face, and the opportunities available to them at a PUI may shed light on ways to engage faculty more deeply, an important factor in building transparency.

The realities of faculty pressures are brought to light, or made transparent, when we consider a day in a life of a PUI faculty member. Faculty members don’t work nine to five jobs; they work, or think about work, day and night. A noon time meeting may sound like a good idea, but for many faculty this would be inconvenient and even impossible: they may be in the lab, in the classroom contributing directly to the institution’s focus on teaching, or in the field (with or without students).

PUI faculty teach from four to eight courses per year, whereas faculty at research intensive institutions may teach only one or two courses. Teaching involves more than showing up and lecturing off the top of one’s head, (although we might all recall a professor or two from our college days who did just that). Teaching, among other things, requires planning for classes, meeting with students, and consulting with community agencies to find projects and viable service-learning opportunities. PUI faculty members often teach hundreds of students per year and their institutions do not typically have teaching assistants to grade work or give introductory lectures.

One of the benefits of attending a PUI is the focus on educating undergraduates and the personal attention that students receive from their professors. Key aspects

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1 This article is reprinted from NCLURA Magazine, Volume XLIII, No. 9, March/April 2011. It is used with permission of the publisher.
of this attention are student-focused activities like academic advising and mentoring undergraduate student work; these take time, a lot of time when done well. Outside of the student-focused activities, a faculty member attends departmental meetings, accepts committee assignments, finds time to write publications and present her work, and balances work and family commitments. Research and the administrative bureaucracy that accompanies it are of a varying level of priority and commitment for any given faculty member.

Transparency vis-à-vis faculty begins with: a) understanding and validating your faculty and stakeholders’ perspectives; b) building relationships by providing regular and multiple modes of communication; and c) providing opportunities to engage faculty in designing and implementing systems of support. Taking a moment to reflect and consider faculty perspectives and validate the realities of faculty stresses and multiple priorities may give the research administrator the necessary patience and creativity to find ways to connect and build trust with faculty. Trust is the underpinning of transparency.

While faculty are the key stakeholders of a sponsored programs office, institutional leaders, auditors (internal and external), and sponsors are also interested parties. Just as faculty demand transparency, so too do these groups, no matter how daunting it may seem for a sponsored programs office to be transparent in all it does. Creating a transparent office at a PUI may seem to leave the office more vulnerable because there are fewer people in the office to absorb criticisms or negative findings. If managed correctly, however, transparency can actually empower a sponsored programs office.

Being transparent means putting all of your cards on the table and taking control of how and in what context errors and omissions will be viewed. If fear of transparency is a concern, then the leadership of the institution should revisit its objectives with regard to compliance. Leaders should encourage staff to identify errors, misunderstandings of processes, or simply lack of knowledge on a topic. This is not an opportunity to scold, but one from which all can learn. When mistakes are made they should be researched and the findings shared with the rest of the office. This reinforces a unified understanding of rules, regulations, and processes and sends the message that mistakes are okay as long as we learn from them. Just as we would encourage someone on the staff to share a new method for streamlining processes and providing better support, we should also encourage a colleague who has identified a gap in their professional development to share this information and their strategy to rectify the situation. Transparency requires a strong leader who will protect staff who come forward with problems. Working in a small office requires one to have a thick skin, an appreciation of the benefits of openly correcting errors, and the persistence to seek and gain the support of institutional leaders.

The process of undergoing an audit teaches us the value of transparency. When there are missteps, we must clearly identify the problem, mitigate the issue (stop whatever it is that is being done wrong), create a procedure or policy to ensure that it never happens again, highlight this new procedure or policy in the file, and document the process for the audit trail. If an auditor finds this file, his or her first ques-
tion should be, “Has this practice stopped?” followed by, “How have you ensured that it will not be repeated?” If this transparent process is adopted, then it is clear that the office is not trying to hide anything. In fact, the office will have already answered the two most pressing questions about the problem.

Being transparent is about the limitations of being human and a willingness to do the best work possible within the confines of time and change management. The nature of research administration is constant change and we must be vigilant in our efforts to keep up with that change. PUI’s have limited human and financial resources to assist with change. As a result, research administrators at PUIs must prioritize their actions to ensure that their offices are as transparent as can be. Transparency builds trust with faculty and gains the support of institutional leaders.

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Growing the Research Enterprise at Predominantly Undergraduate Institutions
Melody Bentz, University of Hawaii

Exceptional customer service is one way to grow the scholarly and research enterprises at your campus. This article offers strategies that make a huge impact, not only on your everyday work life, but that of your customers’ as well. Going that extra mile begins with a single step.

Add Value And Make Life Easier
The University of Hawai‘i (UH) System is comprised of a flagship research campus (UH Manoa), which holds land-, space and sea-grant designations, three baccalaureate campuses (UH Hilo, UH West O‘ahu and Maui College) and six community colleges. UH also serves Hawai‘i through university and education centers, and medical and research facilities located on six islands.

In 2007, the Office of Research Services’ senior administrator recognized that scholarly and research enterprises could grow by expanding services throughout the system. Since then, satellite service centers have been established at key locations including Kaka‘ako, Maui, West O‘ahu, and Manoa, as a commitment to excellence to add value and to make life easier. While service centers provide cradle-to-grave services, support and specialized services such as administration, contracts, compliance, IT and accounting remain at the systems office. This model establishes a single point of contact to make life easier for the customer from proposal development to award closeout. Though predominantly undergraduate institutions (PUIs) and community colleges have teaching at their core, the presence of satellite service centers reaffirm that they make valuable contributions and are important to UH’s scholarly and research enterprise.

Make Customer Service A Priority
Given the modest grant seeking history at some UH campuses, it is essential that the satellite service centers make customer service a TOP priority. Wikipedia defines customer service as “the provision of service to customers before, during and after a purchase.” For the research administrator, whether you provide pre-award, post-award, specialized or cradle-to-grave services, seldom can you do your job effectively without customer interaction.

Research administration is a deadline-driven and emotionally draining profession. Delivering exceptional customer service on a regular basis may prove to be difficult or at times an impossible task. It’s not unusual for research administrators to receive frantic communications from their customers — sometimes daily. How we choose to deal with the situation (yes, it’s a choice) is key to our success at getting the job done in an effective and timely manner...one that leads to a positive outcome.

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experience for all.

**Know Your Customers**
In research administration there are customers at all levels. For instance, within the institution there is a range of primary, secondary, and perhaps tertiary customers. Faculty, staff, and senior administrators may be primary customers; whereas, institutional service providers such as accountants, auditors, attorneys, and librarians may be secondary. Students may be direct or indirect customers. Outside of the institution, other campuses, collaborative partner sites or sponsors may be external customers.

Customer service begins with the initial greeting, whether it’s in person, on the phone, via Skype, or through email. Using good people skills will increase the chances for a positive first impression. To get to know your customers:

◆ Keep a communications log of who is contacting you, whom you are contacting, the nature of the inquiry, and how you respond. Don’t forget to include your colleagues. Ask yourself: Was the experience positive for one or both? What could have been done differently to make it a better experience?

◆ Look at your list. If your customer walked through your door, would you recognize them? If not, look them up on Google, Facebook, LinkedIn or other social media sites. If they are within your organization, search to see who they are and what they do. Add value to your relationship by incorporating what you’ve learned into your next communications to let them know you are interested. When you have a face to go with a name, you establish a connection that shows you care, making it easier for the two of you to have a more positive relationship in the future.

**Be A Good Communicator**
Once the initial meeting is over, how you respond to your customers’ communications influences how you are perceived as a person, a professional, and a peer. In this technological age, it’s so easy for you to make a great impression. It’s also even easier for you to make a bad one. You want to ensure that your communications are always friendly, helpful and positive. Ask yourself: Do I respond promptly to emails and phone messages? Do I follow up when promised? Are my responses appropriate and reflect favorably on me and my office? If you answered “no” to any of these questions, here are some ways to improve your communications skills.

◆ Many times, your customers will work on their projects around their teaching schedules. This often results in you getting emails after business hours. While you do not need to be on the clock 24/7, you can use technology to your advantage and send a quick acknowledgment with minimal effort such as: “I received your [email/phone call] and I will get back to you first thing [Monday morning].” The key is to follow through as promised. It’s helpful to set up a reminder in your calendar. You will be surprised how positive an impression you can make with a simple 30-second response.
◆ Have you ever received an email that makes you ask “What are they thinking?” Your first reaction may be to put them in their place or set them straight. If you feel the need, you can certainly write that email to get it off your chest; however, don’t send it! It’s not easy to take things back once the communication has been made. Your answers to sensitive emails and phone calls will require you to demonstrate a great deal of finesse and restraint. In these cases, it’s important to send that “I will get back to you soon” email. Take time to sit back, breathe, mull it over or discuss it with your supervisor or a colleague. Once you are composed, put a smile on your face and write your response. You will be happy you waited!

◆ Take a proactive approach to addressing your customers’ needs. For example, when you have your customers trained to submit federal reports using a specific process, determine how you can adapt that same process to other expectations you have of them. Standardizing processes will lessen training time and help customers adapt quickly and easily. Proactive behavior makes you their friend... reactive behavior makes you defensive.

When evaluating customer service, think back to how you’ve been treated as a customer. It’s not easy to forget a bad experience...it will stay with you for life. Whether it was good or bad, add value to your job by learning from your own experiences.

Be A Good Listener

Being a good listener is essential to being a good communicator. Addressing customer issues effectively and promptly necessitates taking time to actively listen to the entire problem or read their correspondence carefully. It’s important to grasp the full meaning since many issues require the guidance of others. To make life easier, take notes during a meeting or phone call. At the end, review them with the customer to ensure you have captured their needs accurately. The same is true with written communications. If you are unsure about any part of their communications, ask questions—get clarification!

Word Of Mouth Is Very Impactful

Word of mouth is powerful: while good news travels fast... bad news travels even faster. It’s human nature for people to share their experiences with others, especially bad ones. When a customer’s experience is a positive one, you may not hear anything. Cling to the saying “No news is good news.” However, it’s almost a guarantee that a bad experience will make its way through the grapevine and come knocking at your door. If you do reap rewards, accept your good fortune with a smile and take pride in a job well done!

Go the Extra Mile!

In 2011 UH launched its myGRANT electronic research administration program to streamline tedious paperwork processes. Now, customers are no longer overburdened with walking forms around for signatures. Although it is preferred that an organization promote exceptional customer service as their mantra, it’s not neces-
sary. All it takes is for one individual to be willing and committed to raising their standards of service. As colleagues see the benefits of how good service adds value to the organization and its relationships with customers, they will and small to make positive impacts.

Clearly, customer service makes a difference! It’s as simple as asking “What would my customers’ experience be like if I weren’t here for them?” Due in part to the extended customer service offered by satellite service centers, proposal submissions at UH have increased by 14%. If you can say that because of your contributions you have made a positive impact on your customers’ scholarly and research endeavors then you have reached your service goals. By demonstrating exceptional customer service you will lay a solid foundation that you are a knowledgeable, caring and dedicated research administrator. As your relationships grow your customers will learn to trust you and your expertise and that they can rely on you to “go the extra mile” for them. Ultimately, exceptional customer service will keep your customers coming back to you for more.

About the Author

Melody Bentz, CGP, is a Contracts and Grants Specialist for the University of Hawaii (UH), Office of Research Services where she helped establish the UH West O’ahu Satellite Service Center, assisting faculty and other research administration staff with services from searching for funding opportunities that are the right fit for their projects to project closeout and most everything in between. Before arriving at UH in January 2012, she worked at East Carolina University (ECU) as a Program Specialist for the Thomas Harriot College of Arts and Sciences where she helped launch the first Office of Research. Prior to her work in the college, Melody was a Grants and Contracts Officer with ECU’s Office of Sponsored Programs. In 2001, she began her career in Research Administration at a small PUI, Montana State University-Northern, where she held the positions of Grants Administrator and Director of the Sponsored Programs Office. Melody can be reached at mbentz@hawaii.edu
¶2320.10 How Building Relationships Can Expand International Opportunities for PUIs

Mark Roltsch and Steven M. Gerardi, St. Mary’s University

The perceived need for international research is on the rise, especially in biological and health sciences (Ramirez, 2007; Lombe, Newransky, Crea, & Stout, 2013). In support of this perceived need, funding is available for international research. The National Institutes of Health (NIH), through the Fogarty International Center (n.d.) and various NIH Institutes, provide opportunities to apply for research and training funds for both U.S. and foreign researchers in the developing world. Today, NIH’s Fogarty International Center “funds some 400 research and training projects involving more than 100 U.S. universities.” Last year NIH funded $198,587,000 in grants to foreign countries (NIH Research Portfolio Online Reporting Tools, 2013). The National Science Foundation (NSF, n.d.) also has several programs to support collaboration between US and foreign institutions. The Office of International and Integrative Activities (IIA) at the NSF currently has 597 active grants. A review of that list revealed one from a PUI, a grant to CUNY Medgar Evers College for $13,958 entitled Developing new research collaboration with the University of Malaya. At present, despite the fact that funds are available for international research, few of the studies currently being funded are being done in collaboration with researchers from PUI’s. However, it does not have to stay that way. Researchers at PUI’s can take practical steps to increase their chances of getting a piece of the international research funding pie. This article offers some useful tips for researchers and research administrators in building relationships with potential international research collaborators in order to identify and to expand upon opportunities for PUI’s to engage in international research.

Building Connections

Conducting international research requires collaboration with international partners. For someone at a PUI who is considering the possibilities of conducting international research, this requirement may seem like an insurmountable barrier. To overcome this challenge, researchers must seek out and build connections with potential international collaborators. For example, when the first author worked at the National Heart Lung and Blood Institute (NHLBI)/NIH, he was involved with the review and training development of a global network of ten Collaborating Centers of Excellence (CCE; NHLBI, 2013). Each CCE paired an academic institution in a developed country with a partnering institution in the USA. The CCE’s were tasked to develop infrastructures for research and training to enhance their capacity to conduct population-based or clinical research to monitor, prevent, or control chronic diseases. Each year the primary investigators and trainees from the CCE’s met to discuss the accomplishments of the centers and to collaborate on research. Through these meetings, the first author developed friendships with a number of investiga-

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tors, post-doctoral fellows, PhD students, and student mentors. Connections such as these are fertile ground for nurturing future international research projects. The importance of the role of relationship building cannot be overstressed. In a study of intimate partner violence in Canada and Ethiopia, Bender et al (2011) found “that the best international collaborations may be those that are understood within system realities but are approached first as social relations between people who respect and trust one another” (p.73).

So how does someone at a PUI develop such relationships? Thinking back to one’s undergraduate years, a person may recall having a desire to establish new relationships of the romantic variety. He or she may also recall that the odds of being successful in this endeavor were greatly enhanced by getting out of the dorm room and going places where they were apt to meet people with similar interests. While some time has passed, and motives have changed since the undergraduate years, the ways to establish new relationships are much the same. In order to develop relationships with potential international collaborators, faculty have to go out and meet international researchers with similar interests! One great way to connect with potential collaborators is to meet at conferences in the faculty member’s field.

Connecting At Conferences

Conferences are an obvious place to make connections with people with similar research interests. The best place to make connections at conferences is at poster sessions. An aspiring collaborative investigator can review the poster abstracts in advance to ascertain potential international research posters of interest. Poster presenters are typically eager to discuss their research, especially with an informed researcher with similar interests. Even if the poster presenter is a student, it is likely that their research adviser is close by. Additionally, one is likely to meet other scholars with similar interests who are also visiting the same poster presentation. Many researchers have made productive connections this way.

As in any relationship, potential research collaborators begin feeling each other out for their suitability to carry on a sustained relationship. Just like in dating, if the two don’t “hit it off,” the relationship is likely to go no farther than the first meeting. However, if there is a spark of interest, potential collaborators may decide to take their relationship to the next level. This may include an invitation to speak or work together on a small project. For example, after meeting someone at a poster session, the first author was invited to speak at the presenter’s school in Thailand. After developing a sense of mutual respect and trust, the relationship that started at the poster presentation has continued to evolve to the point where they are presently collaborating on a proposal for a small international grant from their professional association. It is worth noting that these small beginnings are important for larger scale collaborations in the future. For example, some professional associations offer international grants specifically to nurture these types of relationships. When reviewing NIH proposals, reviewers often ask: How much work have the PI’s done together and what have they published together? Given this, working together on a writing project is a good first step for potential research collaborators to establish a
working relationship in the eyes of a grant reviewer.

**Connecting With International Alumni**

A second way to make connections with potential international collaborators is by cultivating relationships with former international students or international alumni from the PUI who have gone on to earn PhD’s or MD’s and returned to their home countries. Institutions’ alumni associations will be helpful in making such connections. Former students are a great source of potential collaborators because researchers already have an established relationship and work history together and may have already collaborated on poster presentations or publications. Other former undergraduate students and alumni may not have gone on to graduate school but may now be in leadership positions in foreign governments or corporations that may be interested in collaborating on research projects. USAID supports the development of these types of collaborations.

**Connecting Through Academic Social Networks**

A third way to make connections with potential international collaborators is to use one of the social networks developed specifically for academics and researchers: Academia.edu and ResearchGate.net. These social network sites were developed expressly for scientists and researchers. These sites afford researchers the opportunity to share papers and data sets, and to ask questions or have online conversations about topics of interest. Both sites were launched in 2008 and already have several million users. In a recent online article on the collaborative power of ResearchGate, Leena Rao (2013) highlights the example of how Orazio Romeo, a researcher in Italy, and Emmanuel Nnandi, a PhD student in Nigeria, met through ResearchGate and collaborated to discover a deadly plant yeast that had killed an infant in Nandi’s hometown. In another example, Rao points out how “Sohail Malik (Political Science and Engineering, Pakistan) was looking for help in statistics, when he found Michael Sandholzer (Radiologist, UK) on ResearchGate. Together, they worked on Malik’s project to identify risk factors generating terrorism and insurgency in Pakistan. Their article has been accepted by a peer-reviewed journal and will appear in 2014.”

**Finding Funding for International Research**

NSF offers several funding opportunities to foster international relationships and collaboration on its website http://www.nsf.gov/funding. One such program is called Catalyzing New International Collaborations (CNIC). This program offers funds for brief international visits or workshops which are expected to lead to research proposals submitted to NSF. Other NSF funding opportunities include the International Collaboration in Chemistry between US Investigators and their Counterparts Abroad (ICC) and the International Research Experiences for Students (IRES) program. Additionally, the NIH Fogarty International Center website www.fic.nih.gov is a great place to direct faculty to look for other funding opportunities. The site lists NIH international opportunities and also lists non-NIH international prospects. Some other places for faculty to look for funding opportunities are the Earthwatch Institute www.earthwatch.org which supports scholarly research
worldwide in the biological, physical, social, and cultural sciences through a variety of grants; and the American College of Sports Medicine’s Oded Bar-Or International Scholar Award. This award allows professionals to gain technical expertise and/or scientific knowledge through an international exchange program.

Summary

Hopefully, this brief discussion will encourage you to consider the potential opportunities in international research. If international research aligns with your institution’s business plan, then consider this quote attributed to Ross Perot (n.d.): “Business is not just doing deals; business is having great products, doing great engineering, and providing tremendous service to customers. Finally, business is a cobweb of human relationships.” Although funds are available to support international research, PUI grant success is dependent upon how effective the institution is at building their web of human relationships. So, if research is your business, get out there and start building!

References


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Research Cluster Development at a PUI

S. J. Langley-Turnbaugh and T. Shehata, University of Southern Maine

Abstract
The University of Southern Maine (USM) designed and implemented an internal Research Cluster Seed Fund competition with the goals of building USM faculty expertise to address industry and community needs, deepening the impact of research through an interdisciplinary approach to solving problems, and leveraging external funding to sustain collaborative efforts. Through two rounds of competitions we funded five teams of faculty and students who have come together with industry and community partners to conduct research ranging from how Maine businesses should address cyber security breaches, to better management of chronic illnesses through the use of information technology. Faculty have reported that learning how to work together in an interdisciplinary team and with external partners is an evolving process that takes time. But, they are all extremely positive about what they have gained by coming together. Faculty needed assistance in setting goals and measurable objectives, and in understanding how a research cluster needs to be more than a sum of its parts. Thus, this competition was a learning process for all involved. We hope this model will continue as a way to focus and leverage USM’s scholarly strengths while developing solutions to the most pressing issues facing our region.

Introduction
The complexity of current societal, global, and scientific problems often requires a wide range of disciplines collaborating across traditional boundaries to bring knowledge to bear on issues of intellectual, scientific, social, economic, environmental, and cultural importance. This complexity and the importance of interdisciplinary research is recognized by the National Academies’ Committee on Facilitating Interdisciplinary Research, Committee on Science, Engineering and Public Policy (2004), as well as several federal funding organizations. Examples include the National Science Foundation’s (NSF) INSPIRE (Integrated NSF Support Promoting Interdisciplinary Research and Education), which supports interdisciplinary research into complex scientific problems (NSF INSPIRE, 2014); the joint effort between NSF and the National Endowment for the Arts to develop a national agenda for funding and collaboration integrating the arts, sciences, and engineering (Harrell & Harrell, 2011); and the National Institutes of Health’s Interdisciplinary Research (IR) program, which is designed to change academic research culture such that interdisciplinary approaches and team science spanning various biomedical and behavioral specialties are encouraged and rewarded (NIH, 2014).

Many universities have pushed to develop more interdisciplinary research projects, and several have developed Centers of Interdisciplinary Research, although these Centers are primarily located at research universities rather than PUIs. For

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many of these Centers, creating linkages between their interdisciplinary research projects and state, regional, and local public and non-profit entities is of utmost importance. Challenges include articulating the relationship between interdisciplinary research and hiring, promotion and tenure policies, and resource allocation (National Academy of Sciences, 2004). It should be noted that the National Academy of Sciences study primarily focused on major research universities. Little information is available on how primarily undergraduate institutions, such as the University of Southern Maine, are prompting interdisciplinary research.

In spring 2013, USM’s Office of Research Administration and Development designed and implemented an internal Research Cluster Seed Fund competition with the goal of building USM faculty expertise to address industry and community needs, deepening the impact of research through an interdisciplinary approach to solving problems, and leveraging external funding to sustain collaborative efforts. Although this effort preceded USM’s plan to transition to a Metropolitan University, the cluster missions, visions, and partnerships align well with a primary goal of an MU, which is to become a steward of place. The purpose of this paper is to describe the process, challenges and lessons learned in developing research clusters in a predominantly undergraduate institution.

Institutional Context

Located in the city of Portland, USM is the state’s only publicly supported predominantly undergraduate metropolitan university, serving approximately 8,000 students. Many students are non-traditional in that they are first-generation college students, part-time, and often older than traditional undergraduate students. Since the late 1990s, USM has been committed to strengthening both its educational mission and its targeted research portfolio.

The Research Cluster competition is funded by the Maine Economic Improvement Fund (MEIF). In 1997 the Maine Legislature (MRS Title 10, Chapter 107-C) established the Maine Economic Improvement Fund to administer investments in targeted research and development and product innovation, primarily focused on applied scientific research and related commercial development conducted by employees and students in the member institutions of the University of Maine System, the seven target areas identified by the Maine Legislature. The target areas are the targeted technologies for which applied research and development is considered most likely to produce significant benefits to the people and economy of the State. These areas are: aquaculture and marine sciences, biotechnology, composites and advanced material technologies, environmental technologies, information technologies, advanced technologies for forestry and agriculture, and precision manufacturing. The MEIF also provides the basic investment necessary to obtain matching funds and competitive grants from private and federal sources.

As directed by Maine law, MEIF funds are annually appropriated to the University of Maine System; the Board of Trustees is responsible for administering the funds.
Research Cluster Seed Fund Competition

Purpose
The purpose of the Fund is to seed- support the development of faculty-led multi-disciplinary research clusters that bolster and expand scholarship and innovative high-impact research across college lines and to work more effectively with the private sector, other institutions, and the community. The outcomes of funded cluster proposals are to: (a) coalesce the depth of USM faculty expertise to address industry and community needs; (b) bring greater internal and external attention to USM faculty research and scholarship, deepening its cumulative impact; and (c) help leverage external funding for sustained collaborative efforts.

Competitive Process
We have released two rounds of internal requests for proposals to seed clusters at $150,000 over two years. We required that proposals demonstrate faculty collaboration across two or more colleges, focus on research projects that address the needs of one or more of the state’s target technology sectors, and have at least one industry partner and one community partner actively engaged in the development and sustainability of the cluster. We defined industry partners as private, for-profit companies, and community partners as other organizations that are not private, for-profit organizations. We did not specify cluster size, but suggested 3–7 individuals inclusive of industry and community partners as an initial starting point for cluster development.

The program announcement also emphasized that the development and growth of the cluster should not end when external funding proposals are submitted or funded. There is full expectation that competitive cluster proposals will include detailed strategies, developed jointly with industry and community partners, for growing and sustaining the cluster beyond the two years of funding, including pursuing external funding.

Allowable Use of Funds
All line items are allowable as long as the amounts are fully justified. Funds may be used to support nine-month faculty summer compensation, undergraduate and graduate student stipends (with graduate tuition), consultants, materials and supplies, remodeling or alteration of facilities (per university policies and procedures and approval), equipment purchases, community workshops, in-state and out-of-state travel (no foreign travel) as long as travel is directly related to the proposal project, course release (cost for a part-time faculty only), or other ways to bring a diffuse but related group of research entities into sustainable, productive collaboration. Although curriculum development is not an eligible activity in this competition, in some cases curriculum development may be a component of an application but it must be justified in the context of seeding the research cluster and meeting the needs of industry and the community partners, and should not be a major cost.

Letter of Intent
We required a letter of intent two months before the deadline for the full proposals
to help us manage the external review process. Each letter of intent must include the project title, the name and title of Principal Investigator, and the names and affiliations of Co-PIs; a one-paragraph description of the proposed cluster; the target technology sector(s); the funding request amount; project duration; the name and contact information for the person in the PI’s department or college who will be the point person for financial management of the grant if awarded; and names and contact information for five individuals with expertise in the proposal’s subject matter. These individuals must reside outside the state and must not have any conflicts of interest with the proposal, the PI, and Co-PIs. In the announcement we informed the applicants that we would contact these individuals to inquire about their interest in assisting us in the external reviews of the proposals and to ensure they do not have conflicts of interest. Applicants were instructed not to contact the potential reviewers and alert them of their interest in participating in the review. Applicants were also informed that we may ask them for additional names if we do not secure at least three reviewers for each proposal.

Proposal Format and Content Requirements

The program announcement included a full description of the required format and contents of a full proposal as described below. Required format included font type, font size, margins, line space, and page limit per narrative section. We encouraged applicants who were considering submitting an application to be absolutely sure that they were submitting a “cluster-ready” application and that all of the items listed in the narrative sections were being answered completely. The content requirements included a Cover Page, a 250-word abstract, the proposal narrative (15 pages), references, budget and budget justification, biosketches using NSF or NIH formats, and letters of commitment from all partners, department chairs, and college deans. Required sections of the narrative included: Rationale and Significance; Rationale Behind Team Composition; Cluster Vision, Goals, and Measurable Objectives; Research Overview; Implementation Plan; Specific Plans for the Target Grant Application(s); Management Plan; and Evaluation Plan.

Review Process

We employed a two-stage process to review proposals. In the first stage, each proposal was reviewed by at least three vetted reviewers external to the University and with subject matter expertise partially based on information collected from the letters of intent. The external reviewers were asked to comment on the proposal’s strengths and weaknesses without scoring, and were also asked to recommend whether an Internal Review Panel should further consider the proposal. Only proposals with substantial strengths and minimum weaknesses would be submitted to the second stage of review by an internal evaluation panel selected by the Provost and the Associate Provost for Graduate Studies and Research, Scholarship and Creative Activity (APGR).

For the internal review process, we developed the following evaluation rubric, the elements of which were included in the announcement as discussion items for what would constitute competitive proposals:
Quality of Response to Instructions (25 points)
Quality of Rationale and Significance (15 points)
Quality of Rationale Behind Team Composition (15 points)
Quality of Cluster Vision, Goals, and Objectives (10 points)
Quality of Research Overview (10 points)
Quality of Implementation Plan (15 points)
Quality of Specific Plans for the Target Grant Application(s) (10 points)
Quality of Management Plan (10 points)
Quality of Evaluation Plan (10 points)
Quality of Budget and Budget Justification (5 points)

The rubric’s evaluation elements are similar to those used by the U.S. Department of Education to inform applicants what the reviewers will be looking for in addition to emphasizing the quality of the responses. The maximum number of points a proposal could score is 125. Prior to meeting as a panel, each member of the internal review panel was asked to score a proposal using the rubric. At the panel meeting, each applicant was provided 15 minutes to present their proposal, focusing primarily on the comments of the external reviewers. After some discussion, panel members were provided the opportunity to change the initial scores before submitting their final evaluations. Based on the average scores for each proposal, the panel recommended to the APGR a rank order of the proposals to be funded.

Award Conditions
In addition to progress and final reports, the award letter to the Principal Investigator outlined specific conditions that included: at least one submitted proposal to an external sponsor before the end of the project period with a total value exceeding twice the value of the cluster grant amount; an annual presentation of the cluster’s work to the university community; published or otherwise publicly available work in some form; and participation of the PI and Co-PIs in a grant-writing seminar offered by the Office of Research Administration and Development during the grant period.

We withheld 20% of the grant amount to ensure compliance with the award conditions. The award letter also specified that overspending of the authorized grant amount would default to departmental funds, and that, in addition to programmatic responsibility, the PI would be responsible for the financial management of the grant, including payroll, human resources and purchasing.

Funded Clusters
Through two rounds of competitions we have received 12 proposals and funded five teams of USM faculty and students who have come together with industry and community partners to conduct research ranging from how Maine businesses should address cybersecurity breaches, to better management of chronic illnesses through the use of information technology. These clusters are engaging over 20 faculty and staff members from all four USM colleges and over 25 academic depart-
ments, along with several undergraduate and graduate students and eight external partners. Both graduate and undergraduate students are engaged as research assistants directly by the faculty in the cluster, based on student skill sets and needed expertise. Some clusters request funding for graduate student assistantships and tuition reimbursements, while others request funding for undergraduate research assistants. The clusters include:

**Health Lifestyle Management Technologies.** A team representing nursing, social and behavioral sciences, computer science, technology and exercise health and sport sciences are developing and piloting a technology-based lifestyle management system. Initially, it will track and help manage weight as an indicator of chronic illnesses. The team has completed its first pilot study with data analyses ongoing and is gearing up for the second pilot. Preliminary results suggest no significant difference between pre- and post-intervention. This may be a result of sample size, as recruitment of participants was an issue. However, the cluster participants have learned much about student perceptions of facilitators and barriers to healthy eating, and they will use this knowledge to improve the second pilot. Plans to improve participation include early recruitment and implementation of strategies to foster more interaction between participants. They have also identified a National Institutes of Health–National Institute of Nursing Research program for funding to further test the system’s application to other areas of chronic illness.

The cluster has benefited from the involvement of students. Specifically, two undergraduate students were very involved in developing the healthy lifestyle website intervention which is being implemented during the second pilot study and a graduate nursing student was very helpful during recruitment of participants for the second pilot. The project PI reports that the students are learning a lot about the research process, as they are formally members of the research team and have been included in meetings and decision-making about aspects of our project.

**Digital Maine.** Faculty, students, and staff throughout the College of Arts, Humanities and Social Sciences and the Muskie School of Public Service are working with computer scientists to harness digital technologies in such a way that a variety of types of research are more accessible to a much wider audience. The team is working on diverse topics ranging from the impact of a rise in sea levels, to the labor history of Maine’s paper mills, through the development of new software applications and the use of geospatial technologies. Currently two subprojects are underway—one focused on envisioning sea change, and a second focused on digitizing a women’s history trail in Maine. They also brought an internationally recognized digital humanities scholar to campus to offer suggestions for improvement of the cluster. The faculty team needs to work to ensure that the cluster is not simply viewed as a digitizing service, but a collaborative interdisciplinary research cluster.

The cluster has engaged several students who, in close association with the PIs, have researched the subjects, collected information, and developed a database that includes data sets with geo-tags, notes on historical contexts, digitally created artwork, and digital photos of historical sites.

A photograph of Envisioning Change by one student assistant was featured in
a recent report made by the Union of Concerned Scientists - a coalition of scientists dedicated to making a healthy planet and safer world. By working with classmates and people outside of USM, and with community groups with a shared goal of applying the knowledge and skills gained in class to real-world situations, these students are making good use of the opportunity afforded by the cluster to engage in experiential learning.

**Web-based Systems to Support Disadvantaged Populations.** This project is providing opportunities for youth campers to stay connected all year with a critical web-based support network. The pilot project focuses on Camp Susan Curtis, a Maine camp for children struggling with poverty, but long term the project will pioneer technological approaches to creating safe and enticing educational experiences for other disadvantaged populations. The project brings together USM’s School of Social Work, Departments of Computer Science, Technology, and Communication and Media Studies with off-campus partners Maine College of Art, Maine Medical Center’s Barbara Bush Children’s Hospital, Maine’s Office of Information Technology, and Poland Spring. The initial pilot in the form of a private social network did not engage the population, so they have made engagement a top priority for the next pilot. The second pilot is currently ongoing, and a stronger sense of place has been created with virtual reality, in collaboration with a business partner. Access to campers after the summer months for data collection and assessment purposes is an issue. Faculty have begun to identify the cluster’s next target population.

The cluster has engaged students to work in the areas of generating content for website development, creating online games, facilitating website migration, learning about the complexities of website security for children and participating in creation of website monitoring protocols, conducting web and stakeholder research during the project planning phase, and capturing imagery in film and video to be used in site design. The PIs believe that the students have gained valuable skills through participation in these activities. In fact, a computer science student was hired recently for full-time employment at a company in Maine that required the experience that he acquired while engaged in the project. Another student completed a final senior presentation based on the project work. The interdisciplinary synergy of this effort has demonstrated to students the value of and need for bringing together different areas of expertise toward a common goal.

**Cybersecurity.** Initially funded in year 1, this cluster brought together faculty from philosophy, communications, and technology to support research and education on workplace ethics and strategic communication important for data security. Midway through the first year, the cluster was folded into a larger research cluster, the Maine Cybersecurity Cluster (MCSC), which has a much larger vision encompassing all aspects of cybersecurity research. MCSC serves as a research, education, and training resource for the state, and its Academic Excellence in Information Assurance proposal is under review by the National Security Agency. MCSC also operates the Cybersecurity Laboratory, the only one of its type in Maine, as a shared and secure testing and evaluation environment for private and public entities. The National Science Foundation has notified the PI that it will fund the MCSC project to pilot an
inter-institutional virtual cybersecurity collaborative learning laboratory as a shared educational environment that enables students in different locations to gain practical collaborative experience in preventing and mitigating cyber-attacks in real time.

**Health Informatics.** This cluster brings together faculty from computer science and public health, and partners such as HealthInfoNet and the Maine Health Management Coalition to develop solutions for linking and analyzing big health data to improve health care delivery and quality and respond to local industry and community needs. Transformational shifts in the delivery and financing of health care have heightened the information needs of health systems, while at the same time the amount of electronic data created by the health care sector has increased exponentially. Maine is on the cutting edge for many health data developments, including having the only operational statewide Health Information Exchange, and one of the first all-payer claims data warehouses. While these and other data hold enormous promise for research and changes to clinical practice, the size, scope, and design of health data systems have created numerous challenges to data access and operability. The proposed research cluster will tackle these and other big data problems in health care delivery, financing, and population health. Representing faculty and staff from two colleges, three degree programs, and two research programs, cluster members reflect a diverse body of knowledge and an extensive theory-based and applied research portfolio with clear relevance to health informatics and health care system performance. In collaboration with external partners, the USM team intends to develop solutions that improve health care delivery and quality and respond to local industry and community needs.

**Lessons Learned**

As shown in Figure 2320.11-1, the implementation of Round 1 enabled us to identify areas that needed to be addressed in Round 2. There were weaknesses in conceptualizing research clusters, in forming business partnerships, in visioning and goal setting, in proposal writing, in budget preparation, and in the external review process.

**Figure 2320.11-1 Areas addressed between Round 1 and Round 2 of the competition**

<table>
<thead>
<tr>
<th>Areas to Be Addressed</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty did not understand the meaning and dynamics of a research cluster and how to develop one.</td>
<td>Schedule a presentation on research clusters immediately after the release of the request for proposals.</td>
</tr>
<tr>
<td>Lack of faculty experience in developing relationships with business and industry partners, which is critical to identifying initiatives that address pressing industry/community needs rather than areas of opportunities. NOTE: This continued to be an area of concern in the second round.</td>
<td>Schedule meetings with the Office of Advancement to help faculty make connections and develop mutually beneficial relationships with external partners.</td>
</tr>
<tr>
<td>Visioning and goal-setting are not strengths of faculty, who tended to be over-ambitious in the context of seeding research clusters. Consequently, transforming vision into reality including identifying critical resources and critical mass of faculty needed for implementation were challenges.</td>
<td>Schedule a presentation on research clusters immediately after the release of the request for proposals.</td>
</tr>
<tr>
<td>Areas to Be Addressed</td>
<td>Solution</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Lack of proposal writing skills was evident, and instructions were not followed.</td>
<td>Require applicants to attend grant writing workshops as a condition of award and stress the need to follow instructions during the informational session.</td>
</tr>
<tr>
<td>Budgets were incoherent and instructions were not followed.</td>
<td>Require applicants to work with staff at the Office of Sponsored Programs when developing budgets for their cluster proposals.</td>
</tr>
</tbody>
</table>
| External review process was faulty in that reviewers had no appreciation of the USM environment. | • Restrict external reviewers’ comments to the strengths and weaknesses of the proposals without scoring.  
    • The internal review panel will consider external reviews and all other aspects related to USM, as well as relationships to industry and management.  
    • Provide applicants the opportunity to respond to external reviewers’ comments during oral presentations to the Internal Review Panel. |

**Faculty Perspective**

Faculty have reported that learning how to work together in an interdisciplinary team and with external partners is an evolving process that takes time. But, they are all extremely positive about what they have gained by coming together with colleagues from different disciplines and now truly appreciate that working together is powerful—the sum is better than its parts. They also acknowledge that working with interdisciplinary groups requires extensive and constant communication in order to create unity, but the benefits far outweigh the time involved.

**University Research Management Perspective**

The research clusters have succeeded in bringing together interdisciplinary groups of faculty with common interests who would not otherwise have initiated collaborative research projects. The clusters have not only received substantial financial support, but also the time and expertise of the staff in Research Administration and Advancement. We were unprepared for the faculty’s lack of expertise in setting goals and measurable objectives, and in understanding how a research cluster needs to be more than a sum of its parts. Addressing these issues required considerable time on our part and delayed the progress of the first group of funded clusters. Thus, this competition was a learning process for all involved.

**Conclusion**

Although the clusters are less than two years old, we hope that this model will continue as a way to focus and leverage USM’s scholarly strengths while developing solutions to the most pressing issues facing our region.

**Literature Cited**


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About the Authors

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Terry Shehata is Coordinator of Institutional Grant Development at the University of Southern Maine (USM). He also assists faculty in developing competitive technical narratives, manages several internal grant competitions and teaches grant writing classes for faculty, undergraduate and graduate students. Independent of his work at USM, he is the Director of the Maine Space Grant Consortium, which is a member of the national network of state-based consortia supported by NASA’s Office of Education. Before coming to USM, he gained his successful grant writing experience over a 30-year period in various occupations including the Maine State Toxicologist, Director of the Environmental Health Program at the New Jersey Department of Health, Vice President of the Maine Science and Technology Foundation, and over 10 years in the private sector. He received his Ph.D. in Animal Nutrition with specialization in Biochemistry from the University of Maine in 1981.
¶2320.12 Calculating the Cost of Compliance at a PUI
Joseph McNicholas, Duke University, and Patrick Hogan, Loyola Marymount University

Instead of just complaining about regulatory burden, colleges and universities should take the time to calculate actual cost of compliance -- including the cost of personnel, information systems, specialized facilities, and programmatic changes that are required to meet regulatory standards . . .

— Diane Auer Jones, Former Assistant Secretary for Post-secondary Education U.S. Department of Education

Abstract
The cost of complying with regulations is often cited as one of the drivers of the high price of college tuition. However, almost no published work on calculating this cost at the institutional level exists. The authors conducted in-depth research on the cost of compliance with federal, state, local and NCAA regulations at a Division I, predominantly undergraduate institution. Administrators from the six primary units on campus identified employee effort spent on compliance activities, as well as costs related to software, training, fees, and external consultations to maintain or report on these activities. This article lays out the methodology used, identifies the parameters, limits and definitions employed, and provides historical context on previous work in this area. It identifies costs by category and by unit and briefly addresses the issue of regulation as a factor in higher tuition costs.

Introduction
Loyola Marymount University, established in 1911 and located in Los Angeles, is a private, not-for-profit, 4-year and above university committed to providing students with a humanistic, liberal arts education in the Jesuit and Marymount tradition. LMU comprises four colleges and three schools: the Bellarmine College of Liberal Arts, the College of Business Administration, the College of Communication and Fine Arts, the Frank R. Seaver College of Science and Engineering, Loyola Law School, the School of Education, and the School of Film and Television. LMU offers 57 major and 51 minor undergraduate degrees and programs. The Graduate Division offers 43 master’s degree programs, one education doctorate, one doctorate in juridical science, one juris doctorate and 13 credential programs. The athletics program competes in NCAA Division I. The University enrolls 6,162 undergraduates and 3,133 graduate students, and employs 550 full-time faculty.

In 2014, the Board of Trustees and the Chief Financial Officer at Loyola Marymount University (LMU) asked LMU’s Regulatory Compliance Committee (RCC) to discover the cost of regulatory compliance on a university-wide scale. As we began researching the question, we found little existing professional literature and no published models for universities to consider in attempting to ascertain these costs. This is true in spite of the fact that 77% of governing boards at institutions of higher edu-
cation report discussing operational, legal and regulatory risks at their board meetings (AGB/UE, 2014, p. 6). Likewise, there was little common language available to define crucial terms. Over the course of 18 months, the authors worked extensively with the RCC and with leaders across campus to develop a model that would adequately capture these costs at Loyola Marymount University.

**Review of Literature**

Though institutions of higher education (IHEs) frequently cite the cost of compliance as driving up the price of a college education, there is, in fact, little published work on the topic. Only three other universities have made such information publicly available: Stanford University, Vanderbilt University and Hartwick College. While our task force worked on developing a model that would help LMU identify regulatory compliance costs, the American Council on Education (ACE) produced the United States Senate’s Task Force on Federal Regulation of Higher Education. This seminal work will inform regulatory compliance policy and debates in higher education for a long time to come, and it confirmed our sense that there is little information to go on. The report comments that “attempts to systematically quantify [regulatory compliance] costs have been few and far between” (ACE, 2015, p. 11).

Vanderbilt University hired the Boston Consulting Group to conduct a study reporting that Vanderbilt spent $150 million to comply with federal regulations in 2012-2013 (Atkinson, 2015). That number, representing 11% of Vanderbilt’s total non-hospital expenditures, became a central figure in a public debate about the cost of college tuition and was cited in the ACE report, in popular press, and in higher education forums. The Vanderbilt study also added fuel to political debates surrounding the reauthorization of the Higher Education Act in 2015 (Stratford, 2015). And, although Vanderbilt did not release its methods (Blumenstyk, 2015) the study’s findings have received much commentary regarding combining costs for research compliance with costs for student-oriented regulations and for not distinguishing costs applicable to all business from costs unique to higher education.

In any case, it is unlikely LMU would benefit from knowing Vanderbilt’s costs and methods. As a major research institution, Vanderbilt’s activities, and thus their compliance costs, are highly divergent from LMU’s in both kind and scale. Funded researchers, for example, spend a larger share of their time on compliance-related issues. The FDP Faculty Burden Survey conducted in 2009 found “42% of the time spent by an average PI on a federally funded research project was reported to be expended on administrative tasks related to that project rather than on research” (Rockwell). Much of that effort is related to compliance, and may well be unique to federally funded grants. Therefore, the more an institution relies on federal research dollars, the more likely they are exposed to those kinds of costs. Vanderbilt expended $572 million on research and was ranked 35th in the National Science Foundations’ Higher Education Research and Development Survey (HERD) in 2013. That same year, LMU, a predominantly undergraduate institution, ranked 364 in NSF survey, with $6.7 million in R&D expenditures.

Hartwick College, a private, liberal arts and sciences college in New York, pro-
duced a report in December 2012 that provided detailed information on an internal audit into the cost of compliance and accreditation (Zack-Decker, 2012). The document, and its extensive appendices, contains much practical information about the kind and range of regulatory compliance activities undertaken at IHEs. It also draws a useful distinction between requirements to comply and requirements to report. Considering the scope of the work conducted, we were surprised at the relatively low cost numbers reported: $297,008 including salary, fringe benefits, direct costs, and accreditation costs. This number accounts for approximately 0.04% of the college’s annual operating budget. Subsequent to the production of that report, Hartwick College President, Margaret Drugovich, said that the final number for Hartwick and other colleges is likely much higher, pointing out that “some of my colleagues estimate it to be 15 to 20, even 25% of their overall operating budget” (McNutt, 2014).

The only previously reported number we could find was produced by Stanford in 1997. Then Stanford President, Gerhard Casper, reported to the National Commission on the Cost of Higher Education that Stanford spent $20 million on compliance annually and that “‘7.5’ cents of every Stanford tuition dollar goes toward supporting these regulatory costs.” (Ingram, 1997). Like Vanderbilt’s 2015 figures, Stanford’s 1998 figure became part of the political debate around changes in the Higher Education Act.

Thus, at the time of this writing, the most credible, publicly available claims of the costs of regulatory compliance range from less than 1% of operating costs at a private liberal arts and sciences college to 7.5% and 11% at premiere research institutions. Unfortunately, the dearth of published, reliable, information on the methods used to arrive at these cost figures makes it difficult to generalize from them or to apply their method to LMU. And, therefore, we lack a benchmark against which to set our management expectations. However, it is widely understood that pinning a dollar value on compliance costs is extremely challenging. Anne Gross, vice president for regulatory affairs at the National Association of College and University Business Officers (NACUBO) has commented, “It’s very difficult to give a number. . . Trying to quantify the cost of regulation is something we’ve talked about for years, but frankly we’ve never figured out how to do it” (Marcus, 2015).

The authors do not claim that we have done it either. However, we do feel that we have developed a means of helping our own university identify our compliance costs in order to better understand their sources and to begin to manage them even more effectively. In what follows, we present a detailed overview of the design and implementation of our self-study to enable others to perform (and refine) similar work at their college or university. The authors have also sought to identify resources already in place at LMU to facilitate this work, as it is likely that the level of available resources will vary widely across institutions.

**Methodology**

*Envisioning the project*

The Regulatory Compliance Committee (RCC) charged with gathering this information is chaired by the University Risk Manager, and includes representatives
from the six major divisions within the university including Business and Finance, Student Affairs, Administrative Services, Academic Affairs, Loyola Law School, and University Relations, plus a representative from Internal Audit. The RCC met monthly and, later, as the project developed, bi-monthly, to discuss the scope of the project including which information might already be available and accessible, which information would require effort and knowledge to ascertain, and which simply would not be possible or desirable to discover.

The Committee reviewed and discussed a range of “mandatory” costs that may or may not be labeled costs of “regulatory compliance.” Early on, the committee determined that costs associated with internal policies or business practices would not be considered regulatory compliance costs. It was also determined that accreditation costs would be excluded. This is a significant constraint on the scope of the work because securing and maintaining accreditations often entails considerable costs.

LMU is accredited by the Western Association of Schools and Colleges (WASC) Senior College and University Commission as well as 15 other program-specific accreditations ranging from the Accreditation Association for Ambulatory Health Care to the National Council for Accreditation of Teacher Education. Maintaining these accreditations involves extensive effort in research, preparation and submission of the required reports, as well as the work to ensure our programs meet or exceed the standards in the first place. These costs were excluded from the scope of this report after much discussion, as they represent another cost category (perhaps more related to educational quality) worthy of study on its own.

Another area of mandatory costs involves effort devoted to human resource training such as harassment, sexual and interpersonal misconduct, etc. These expenses are partially captured in this study through inclusion of the cost of acquiring software to conduct this training. However, the survey used does not specifically capture the effort expended in completing the training. And though the number of personnel involved may be high, the number of hours involved is quite low—approximately 3 hours per year. The total personnel expense is unlikely to exceed two-thirds of an FTE. While this specific cost does not appear in the current study, we plan to include it in future questionnaires as we fine-tune the research.

As the committee and the authors discussed the range of activity that might be considered compliance related, we identified the following costs to be within the scope of the report:

◆ Costs related to maintaining compliance with federal, state, and local regulations
◆ Costs related to documenting and reporting compliance with federal, state, and local regulations;
◆ Costs related to complying with and reporting on NCAA regulations (LMU is a Div. I NCAA school).

Prior to crafting a method of gathering information, the committee recognized a need to design a lingua franca for the initiative. We created a short list of definitions (see Appendix A) for use by the committee and ultimately by the people asked to complete the questionnaire. The single most important term/definition, and the one
referenced most frequently throughout the initiative, is:

**Regulatory Compliance Effort**: “Regulatory compliance effort” refers to the percentage of time devoted by LMU employees to read and understand applicable regulations, to design, implement, or modify compliance activities for those regulations, to monitor and oversee specific regulatory compliance efforts, to gather and confirm relevant data, and to generate and submit reports to appropriate agencies or organizations. Thus, “regulatory compliance effort” refers to both the work of keeping the university in compliance and the work of generating the reports that document compliance activities.

This definition helped all participants determine which activities should be included and which excluded from the final numbers. As a general statement, the term interpreted compliance-related effort broadly (as opposed, say, to “the cost of preparing reports” which was the standard employed by Hartwick), and that broader definition is more helpful to LMU as we look for ways to manage these costs (Carlson). In a similar vein, our study does not distinguish between regulatory compliance required of all business and regulatory compliance specific to higher education.

**Determining goals and methods**

The RCC determined that the following specific information would be essential to the project:

- The identification of any employee with responsibility for regulatory compliance issues;
- The amount of time (effort) the employee spent on regulatory compliance;
- The amount of annual fees paid to regulatory agencies;
- Any training paid to maintain certification and licensure for employees or to develop competencies required to comply with regulations;
- Any software or computer programs purchased to help maintain compliance;
- Any payments made to consultants and public accounting firms to help maintain compliance.

A range of methods to gather this information was considered. For example, the committee explored conducting an analysis of the financial statements to identify expenses related to compliance. That approach was deemed impractical due to limits in how expenses are identified and the range of position titles involved. At LMU, for example, only four job titles include the word “compliance,” and even then, always in a hybridized form such as “Director, Information Security and Compliance” or “Associate Athletics Director/Compliance.” Instead, responsibility for compliance effort is shared across existing job titles and categories. Higher education as an industry, however, seems to be moving toward greater specification of compliance titles and roles. According to the ACE Report (2015), “The American Action Forum found that the number of individuals in higher education with the title of ‘compliance officer’ has grown by 33% in the last decade” (p. 11). This is an important indus-
try trend that warrants further investigation; however, counting titles clearly would not address our needs in determining costs at LMU.

Rather, it was decided that in order to secure the most informed and reliable information, we should turn to work previously done by the RCC to create a compliance database (Appendix C). During that phase of work, LMU compiled a list of 113 federal, state, and local regulations that require specific information to be collected and/or actions to be taken. The list also linked each regulation with the parties responsible for compliance within LMU, (known as “compliance owners”) as well as the due dates for reports. This information populated a dynamic, web accessible database that allows the University Risk Manager to readily access information, sort by due dates, and identify LMU employees who would have more information. Note that this approach is distinct from Hartwick’s, which included cost figures only for reporting activities, but which also included a list of regulations for which no reporting is required.

Creating the Questionnaire

The mechanics of questionnaire development and administration will vary extensively from campus to campus. LMU subscribes to Qualtrics to help students, faculty, staff, and senior administrators gather a range of information for research, internal control reviews and process improvement purposes. Fortunately, LMU enjoys robust Survey and Evaluation Support through the Office of Assessment whose mission includes providing “leadership and support in the University’s efforts to create a culture of evidence, learning centeredness, and continuous improvement [including] designing and implementing institution-level assessment projects . . . [emphasis added].” The Associate Director generously helped us formulate appropriate questions for the types of data we desired to receive, identify question formats and prompts that facilitated users’ understanding of the questionnaire, and create plans for organizing the data we would ultimately gather (Appendix D).

One section of the questionnaire allowed for a qualitative answer. We asked each respondent the following:

◆ In fiscal year 2014, did the cost or effort of maintaining regulatory compliance increase, decrease, or stay about the same?

◆ Do you anticipate the cost or effort to maintain regulatory compliance in fiscal year 2015 will increase, decrease or stay about the same?

Administering the Questionnaire

In December, 2014 we piloted the questionnaire with a select group of employees with compliance responsibilities. Their input led us to improve the phrasing of certain questions, clarify the units to be reported (for example, hours or percent effort), and improve the functionality and navigability of the survey.

Upon creation of a final questionnaire and prior to distribution, the University Risk Manager presented the project to LMU’s Vice President’s Council, which consists of all Vice Presidents, Vice Provosts, and Associate Vice Presidents that have
responsibility for compliance oversight. The University Risk Manager fielded their questions and concerns, and also clarified that the VP Council members should forward the questionnaire to the subject area experts, including the compliance owners, on their staffs for completion. This step was critical to underscoring for employees the institutional importance placed on their answers. It also likely contributed to the 100% response rate we received. All answers had been gathered by June 2015, at which time they were compiled into unit level reports and sent back to the members of the VP Council for review, modification, further information, and/or confirmation. In almost all cases, the data was verified as accurate. A few Council members requested revisions or correction.

Generating Cost Figures

Once the data was confirmed, the Director of Financial Planning and the Vice President of Human Resources identified the listed employee positions in the Human Resources Management System (HRMS) and used their effort levels to calculate corresponding salary and fringe amounts. The RCC was not privy to any salary and fringe information; this data was kept confidential per LMU policy. However, the total salary and fringe calculations by unit were provided to the authors and were combined with the other survey responses to determine our best estimate of the overall cost of compliance for FY 2014.

Results

Our study found that LMU expended $8.8 million on compliance or 3.5% of net tuition and fee total dollars. A total of 292 employees spent some portion of their time on compliance issues in FY 2014. This figure represents 23% of our overall staff count of 1,246, and does not take into account any faculty effort in their role as faculty (i.e. outside of formal administrative functions they may have). It translates to 58 financial FTEs. Salaries and fringe costs alone comprise 75% of the total calculated cost of compliance. In December, 2015 a written report was presented to the LMU Board of Trustees including total figures as well as unit-level explanations of cost categories (Appendix E).

<table>
<thead>
<tr>
<th>Elements of Compliance Costs</th>
<th>FY2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compensation</td>
<td></td>
</tr>
<tr>
<td>Salaries &amp; Fringe Benefits</td>
<td>6,620,000</td>
</tr>
<tr>
<td>Total Compensation</td>
<td>6,620,000</td>
</tr>
<tr>
<td>Non-compensation Expenses</td>
<td></td>
</tr>
<tr>
<td>Software</td>
<td>1,365,000</td>
</tr>
<tr>
<td>Consulting</td>
<td>508,000¹</td>
</tr>
<tr>
<td>Training</td>
<td>225,000</td>
</tr>
<tr>
<td>Fees</td>
<td>96,000</td>
</tr>
<tr>
<td>Total Non-compensation</td>
<td>2,194,000</td>
</tr>
<tr>
<td>Total Cost of Compliance</td>
<td>8,814,000</td>
</tr>
</tbody>
</table>

¹ Auditing and Legal fees are included in Consulting. Note that a five-year average of legal fees was utilized to address natural and on occasion wide variations.
We also found that these costs were borne unevenly by the various divisions. Business and Finance carried 40% of the burden for regulatory compliance costs (a figure that includes the software costs of the major administrative systems) followed by Student Affairs (25%), Administration (20%) and Academic Affairs (12%). We projected the cost of compliance to FY 2015 by applying budgeted salary increases with no estimated increases to other elements.
In addition to the impact of annual salary increases and increased benefit rates, we expect to see other cost increases related to future changes in regulatory statutes. Additional regulations usually call for additional resources to be invested to address both compliance and the effort to monitor and report on compliance. Most of our survey participants “expect the unexpected” in terms of increased costs due to unanticipated regulatory change. A change in focus by regulators can increase the cost of compliance even if there is no change to reporting costs. These expenses cannot be projected accurately. However, there are some known increases that will impact years subsequent to fiscal 2014 as a result of the Affordable Care Act and the changes in California’s state compensation laws.

Discussion

The cost of compliance with regulations is often cited as one of the drivers of the high price of tuition. Rolf Wegenke, president and CEO of the Wisconsin Association of Independent Colleges and Universities and a former board member of the National Association of Independent Colleges and Universities says that “the fastest-growing contributor to increased administrative staff and overall operating expenses for colleges is federal, state, accrediting and other associated regulatory compliance obligations. . . .” For evidence to support this claim, he refers to the 2012 Hartwick College study (McNutt, 2014). However, if the cost of compliance at Hartwick is actually less than 1% of university expenditures, it seems unlikely to be the fastest growing contributor to staff and operating expenses.

Nevertheless, the authors do not dismiss the significance of the cost of compliance altogether; even 3.5% can have a profound impact at an independent, private college that relies primarily on tuition income. At LMU, we are keenly aware that nearly $9 million in regulatory compliance expense represents a lot of missed opportunities: opportunities to provide student scholarships, to keep tuition increases low, to enhance educational and research programs, and to otherwise fulfill the primary mission of the university. Nor does LMU, or any predominantly undergraduate university, have the power to attract hundreds of millions of dollars in federal grant money, and the indirects they bring, to pay for a larger compliance staff and develop economies of scale. In any case, the ACE Report (2015) correctly points out that regulatory requirements should not be perceived as providing a “free good,” and that “the Department [of Education] should accurately analyze compliance costs and seek to minimize them” (9).

While acknowledging that it is possible that regulatory costs are not as high as administrators believe, Diane Auer Jones suggests that whatever their costs, revealing regulatory burdens on institutions of higher education (IHEs) can be a teachable moment. She proposes that colleges and universities “should add a line to their tuition bills called the Federal Regulatory Compliance Fee, so that parents and students (and, yes, politicians) know just how much regulations cost them” (2010). Indeed, in the absence of good information on the cost of compliance from the institutions involved, neither the Department of Education nor any other government agency, will be in a position to make informed decisions about the effects of their regulatory policies. While
the mantra that “less regulation is better” certainly appeals to many, that notion must be tempered with the recognition that many regulations provide for the health, safety and welfare of students, faculty and staff. They foster a more equitable and just society. They help provide an even playing field for all in higher education. In short, many of these regulations serve as partners in higher education to help us fulfill our missions.

Conclusion

We believe the method presented here provides our institution a reliable baseline measurement for future efforts to capture regulatory compliance costs. In particular, benchmarking the effort expended is the first step toward implementing greater efficiencies to drive down the labor costs associated with compliance. Further, analyzing this effort will help LMU refine its understanding and management of regulatory costs, improve business processes and, where feasible, automate regulatory reporting by leveraging existing systems and tools. More efficient systems may both drive down costs and result in yet higher level of compliance, as well. This self-study also positions us to incorporate annual monitoring into our business practice and measure our progress by revisiting the regulatory compliance cost questionnaire periodically every few years.

Further, we feel that conducting this exercise to identify the costs of compliance has in itself contributed profoundly to strengthening the culture of compliance we have been creating at LMU. Because of the broad involvement of so many across campus, the study communicates to unit leaders the importance of balancing high standard of regulatory compliance with judicious, informed cost management. We have embodied the vision perhaps best articulated by Peter F. Lake (2013)”to create a culture in which compliance is seen as everyone’s job... [and] the specific tasks of compliance [are] delegated to a variety of administrators and offices.”

Acknowledgements

The authors would like to express our gratitude to the following people, without whom, this work would not have been possible. Former LMU President David Burcham and the Board of Trustees Finance Subcommittee challenged us to tackle this problem. LMU President Timothy Law Snyder, Provost Joseph Hellige and Chief Financial Officer Thomas O. Fleming, Jr. encouraged us to pursue the research wherever it led. Doug Moore, the University Risk Manager, provided leadership in chairing the Regulatory Compliance Committee, helpful guidance on the conduct of the survey, and insightful editorial comments to the final document. Maureen Cassidy, Director of Internal Audit, who asked questions, anticipated issues and lent us her considerable editing skills. The Educational Advisory Board provided the RCC with preliminary external research on the costs of higher education. The members of the RCC contributed input and feedback to the survey design and questions. Christine Chavez, Associate Director of Survey Research at LMU, assisted us in creating and troubleshooting the questionnaire. Abbie Robinson-Armstrong whose Senior Vice President Fellows Program, provided Joseph McNicholas the opportunity to join the RCC to coordinate the documentation, perform data collection, and write up the results.
References


Appendices
◆ Appendix A: Definitions
◆ Appendix B: Instructions
◆ Appendix C: List of Regulations
◆ Appendix D: Questionnaire

About the Authors
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Opportunities for Advancing a Culture of Grant Seeking

Jeremy T. Miner, University of Wisconsin-Eau Claire

One of the challenges faced by many research administrators at predominantly undergraduate institutions is advancing a culture of grantseeking. Because teaching is recognized as the top institutional priority, often far ahead of service and scholarship, research administrators frequently find themselves educating faculty about the grants process as well as persuading them that it is a worthwhile and rewarding activity. Some research administration offices even offer a range of incentives to encourage faculty to write grants, such as additional summertime compensation, reassigned time during the academic year, access to human resources in the form of student research assistants and technical consultants, matching funds for equipment purchases, and supplemental funding for travel to conferences, project supplies, and professional development opportunities. Beyond incentivizations, there’s another place where changes can occur that would help facilitate a positive culture of grantseeking: doctoral programs.

It is axiomatic that some of today’s graduate students will become tomorrow’s college faculty. As such, an obligation exists to train doctoral students not only to be “better students” and “better college teachers” but also to be “better assistant professors” (Gaff & Lambert, 1996, p.44). Graduate programs are effective in developing students’ skills in researching and scholarly publishing but sometimes fall short in developing their skills in teaching, advising, mentoring, time management, service, and administration (Austin, 2002; Campbell, Fuller, & Patrick, 2005; Nerad, Aanerud, & Cerny, 2004; Solem & Foote, 2004; Wright, et al., 2004). Future faculty need to know that grantseeking will be an integral part of their scholarly expectations, not an added responsibility.

Although the National Science Board (1998) has long acknowledged that the competitive grant system itself helps “shape the culture and working environment in universities,” grantseeking has a limited role and low-to-modest profile in many graduate programs. Its standing tends to be influenced by the interests of individual students and the expertise of particular faculty rather than a deliberate structure of the program. While a topic such as ethics is often woven into the fabric of the curriculum, students interested in grants must assemble their own patchwork of internships, independent studies, advising relationships, and, when available, specific grant writing courses. Tightly structured graduate programs compel doctoral students to place value on curricular offerings that, first and foremost, meet degree requirements and second, are perceived to prepare them adequately for academia. Unfortunately, many students complete their graduate programs without a clear understanding of the true breadth of responsibility that goes along with being a member of the faculty. Consider: of two common indicators of scholarly activity, graduate students are quick to recognize peer-reviewed publication; less well-known is serv-

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1 This article is reprinted from NCURA Magazine, Vol XLVIII No 3, May / June 2016. It is used with permission of the publisher.
ing as a principal or co-principal investigator on an externally funded grant (Abbott & Sanders, 1991; Fairweather, 2005; Massey & Wilger, 1995; Stratten & Owens, 1993).

By incorporating grantseeking activities into an overall professional development plan, doctoral programs and faculty mentors can assist graduate students in their transition from incipient to ardent academics. Put differently, doctoral programs must recognize that the traditional three-legged stool of academia has braces on it, rungs that join each of the legs together. Grant dollars represent rungs that connect, support, and enhance faculty teaching, service, and scholarship. Grantseeking is integral to, not separate from, achieving individual, departmental, and institutional goals.

Myriad opportunities exist to infuse an appreciation for grantseeking into doctoral programs:

◆ **Show students how to identify and qualify sources of project funding.** Basic reference tools are available online through most universities, colleges, and large public libraries for finding public and private grantmakers. These database tools offer tutorials for conducting effective keyword searches.

◆ **Involve students in the process of designing projects and writing grants.** Analyzing RFPs (Requests for Proposals) involves asking a series of questions to determine whether the grant program is a good match for a potential project and how much work will need to go into developing a competitive application. Immersing students in strategy and writing sessions helps to demystify the process by which proposals evolve from “good” to “excellent.”

◆ **Engage students in the administration of grant awards.** Winning a grant is not an end in itself; it is a means to enhancing teaching, service, and scholarship. Implementing a project once a grant has been awarded may involve navigating through both institutional and sponsor administrative processes to hire personnel, issue purchase orders for equipment and supplies, submit travel requests, secure approvals from the IRB (Institutional Review Board) or IACUC (Institutional Animal Care and Use Committee), manage regulatory agency compliance requirements, formalize subcontract agreements, reallocate budget funds, and request no-cost extensions.

◆ **Inform students when they are benefitting directly from grant support.** Sponsors trust that awardees will be good stewards of their funds. When items such as research assistantships, conference registration and travel, and materials and supplies are supported by internal and external grants rather than departmental funds, convey to students that this represents a strategic investment by the sponsor. An awareness of the source of funding may increase their respect for the grant-maker, their commitment to the project, and their appreciation for the support itself.

◆ **Provide access to networks of academics, community members, and other professionals who might serve as resources on grant projects.** The value of networking cannot be understated. A casual introduction among colleagues in the office hallway, at a school board meeting, or between sessions at a national conference can lead to short-term benefits such as timely information exchanges, and long-term benefits such as productive research collaborations. Program officers from federal agencies
regularly attend the regional and national conferences of professional associations to provide agency updates, meet grantseekers, and discuss project ideas.

◆ Expose students to the different types of collaborations that exist within academia, between academia and industry, and between academia and nonprofits. As a way to maximize their funding, some public and private sponsors are strongly encouraging, or even requiring, collaboration in grant applications. Partners, whether within academia or across industry and nonprofit organizations, do not always share the same definition of “collaboration.” Further, partners do not always recognize that different types of collaborations exist, varying in their degrees of goal sharing and interaction. This awareness in itself helps to manage grant project expectations.

◆ Build discussions of grants into research methods courses. The responsible conduct of research includes considering legal, moral, and ethical dimensions of the grant project’s design and the qualifications of the principal investigator. Thought may be given as to whether a proposed project truly reflects the principal investigator’s scholarly agenda or simply amounts to chasing grant funding. Deliberations may also occur as to whether funding should be accepted from a particular sponsor, depending on terms and conditions that are associated with a grant award.

◆ Offer a specific course on grantseeking. Engaging in a semester-long course on planning and writing grant proposals will allow students a distinct opportunity to practice new concepts and skills. The course can provide breadth, overviewing ways to develop fundable projects, identify and qualify sponsors, write public and private grants, and construct budgets. The course can also be designed to provide depth, focusing exclusively, for example, on seeking funding from a particular federal agency and include mock proposal reviews.

◆ Recognize and reward students who attend grant trainings. Many institutions of higher education offer grant trainings on campus put on by the Office of Research and Sponsored Programs, Development Office, or Continuing Education. Some periodically organize events where federal agency representatives or consultants conduct one-day informational sessions or grant writing workshops. Students who participate in these activities may have the capacity and inclination to support the development of a grant.

◆ Celebrate successes. Preparing major grant proposals can take a great deal of time and energy. In recognition of this commitment, it is important to acknowledge individual and collective efforts. Funding rates vary widely among sponsors, so celebrations should recognize a job well-done, independent of a grant award. That is, students need to know that trying “counts.” A pat on the back, a handwritten note of thanks, a celebratory meal, an announcement in a department meeting, or an update in an internal newsletter, represent but a few of the numerous ways to reinforce desired behavior. Grantseekers who feel good about the process are more likely to continue writing proposals, regardless of the outcome of any particular submission.

In an era when stiff competition exists for limited internal university budget dollars, grantseeking takes on an even more pronounced role: faculty who have the
ability to secure external funding to support their teaching, service, and scholarship enjoy greater license to pursue an uninterrupted scholarly agenda. Accordingly, the time to learn grant writing is during graduate school. By embedding the topic of grants into a deliberate structure, doctoral programs can provide ongoing exposure to a range of grant-related experiences, from planning and writing proposals to networking with potential collaborators and program officers, to administering awards and celebrating successes. This programmatic change holds the potential to lay the foundation for a positive culture of grantseeking, shaping the way future faculty perceive and react to the constructive advances of research administrators, as well as to enrich the preparation of graduate students for their impending careers in academia.

References
About the Author

Jeremy T. Miner, M.A., is Director of Grants and Contracts at the University of Wisconsin-Eau Claire. He is active in NCURA at national and regional levels, serving on committees and as an officer, presenting educational sessions, and publishing journal and magazine articles. Jeremy was an NCURA International Fellow in 2014 and currently serves on the Select Committee on Global Affairs. He can be reached at minerjt@uwec.edu
This section includes or discusses practical guidance and tools — checklists, flowcharts, etc. — relating to predominantly undergraduate institutions and their sponsored research programs. These materials are culled from a variety of authoritative sources.

Help in Selecting an Outside Auditor
AIS editors

The Mid-America Intergovernmental Audit Forum publishes *Selecting an External Auditor: Guide for Making a Sound Decision*. According to the report’s Foreword, “The benefits of having a high-quality audit of a government’s financial statements are both immediate and long-term. For example, high-quality audits can result in recommendations for immediate improvements in management operations. Furthermore, high-quality audits can result in increased accountability over government programs and long-term improvements in public confidence in government.” Further, Circular A-133 expects grantees to consider audit quality factors in addition to price when choosing an external auditor.

The guide lists “five basic steps for an effective audit procurement process”:

◆ Step 1: Planning — determining what needs to be done and when
◆ Step 2: Communicating Audit Requirements and Soliciting Proposals — writing a clear and direct solicitation document and disseminating it widely
◆ Step 3: Selecting a Qualified Auditor — authorizing a committee of knowledgeable persons to evaluate the ability of prospective auditors to effectively carry out the audit
◆ Step 4: Writing the Agreement: Documenting Expectations — documenting the expectations of both the entity and the auditor
◆ Step 5: Monitoring the Audit: Ensuring a Quality Audit — periodically reviewing the progress of the audit

At the end of each discussion, there is commentary on the needs of small entities and special considerations when contracting for a single audit.

For further information, contact the Mid-America Intergovernmental Audit Forum at www.auditforum.org.
Distinguishing Support Mechanisms

AIS editors

The question sometimes arises as to what type of “mechanism” is funding a particular project. This sometimes happens when the sponsored programs office has had little up-front involvement in a project. A simple distinction often can be made concerning external funds as follows: A *gift* or *voluntary donation* of funds is generally *not* considered sponsored funding. Gifts or donations usually have few or no restrictions on use (and are often irrevocable) and few or no reporting requirements. A *grant* is an award of funds to support a specific purpose. A grant usually extends for a defined period, comes with reporting requirements, and has terms and conditions. The recipient could risk loss of award funding if found to be noncompliant in any way. A *contract* is a form of federal procurement for the purpose of acquiring goods and services. A contract usually extends for a defined period, comes with reporting and/or deliverable requirements, and contains detailed performance specifications that must be satisfied (see ¶1705.7 and ¶2705.1).

Accounting and auditing requirements generally differ for a gift vs. an assistance award. In larger institutions, gifts are usually not handled by the sponsored research office, but rather the development or fundraising office. In smaller institutions, this may not be the case.

Federal Awards.

In the case of the federal government, it “uses a variety of funding mechanisms to achieve national priorities through partnerships with nonfederal parties” particularly colleges and universities.¹ Federal *grants* and *cooperative agreements* are forms of assistance in which a federal agency transfers something of value, such as money or property, to a party for a purpose, undertaking, or activity of the grantee that the government has chosen to assist. The Federal Grant and Cooperative Agreement Act of 1977 sets down criteria for executive agencies in selecting appropriate legal instruments to achieve uniformity in grant and cooperative agreement use, a clear definition of the relationships they reflect, and a better understanding of the responsibilities of the parties to them.

The language of the agreement should guide in determining what type of mech-

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anism is involved (see ¶1305.1). The main distinction between a grant and cooperative agreement — both considered forms of “assistance” — is that substantial involvement is expected between the federal agency and the university when carrying out the activity contemplated in a cooperative agreement, whereas such involvement is not expected in carrying out a grant agreement. Cooperative agreements are useful where federal project management would be helpful due to the novelty or complexity involved, collaborative research is desirable, or federal involvement is needed in early stages where standards are being developed.²

Federal contracts are mutually binding legal relationships obligating the “seller” to furnish the supplies or services and the buyer — the government — to pay for them. The federal government typically uses contracts (rather than grants) as a mechanism when the principle purpose of the funded activity is to provide something for the direct benefit of the federal government. For example, contracts can be used to procure independent evaluations of programs or to conduct research for agency missions.

A review of how two federal agencies — National Institutes of Health and National Science Foundation — define assistance awards may prove helpful (see Figure 2330.2).

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² See footnote 1.

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| Solicitation Method | Grant: Application kit or guidelines (see Grants.gov) |
| Cooperative Agreement: Request for application (RFA) (see Grants.gov) |
| Contract: Request for proposal or quote (RFP, RFQ) |

| Governing Instrument | Grant: OMB circulars |
| Cooperative Agreement: OMB circulars |
| Contract: Federal Acquisition Regulations |

| Scope of Work | Grant: Developed by PI |
| Cooperative Agreement: Developed by PI |
| Contract: Developed by sponsor |
**Figure 2330.2-1: Forms of Federal Assistance**

◆ **Assistance, Award**

*Assistance* is the award of money, property, or services to a recipient to accomplish a public purpose as authorized by federal statute. Assistance relationships (e.g., grants) are expressed in less detail than are acquisition relationships (contracts), and responsibilities for ensuring performance rest largely with the recipient or are shared with the government. (NIH)

*Financial assistance* is the transfer of money or property to an eligible entity to support or stimulate a public purpose authorized by statute. (NIH)

An *award* is the provision of funds, based on an approved application and budget or progress report, to an organizational entity to carry out a project or activity. (NIH)

*Assistance awards* entail the transfer of money, property, services or other things of value from the federal government to a recipient to accomplish a public purpose of support or stimulation. Assistance awards involve the support or stimulation of scientific and engineering research, science and engineering education; or other related activities. Grants or cooperative agreements are used for this purpose. (NSF)

◆ **Grant, Grantee**

A *grant* is a financial assistance mechanism providing money, property, or both to an eligible entity to carry out an approved project or activity. A grant is used whenever an NIH Institute or Center anticipates no substantial programmatic involvement with the recipient during performance of the financially assisted activities. (NIH)

A *grant* is a type of assistance award and a legal instrument that permits an executive agency of the federal government to transfer money, property, services or other things of value to a grantee when no substantial involvement is anticipated between the agency and the recipient during the performance of the contemplated activity. Grants are the primary mechanism of support. (NSF)

A *grantee* is an organization awarded a grant or cooperative agreement that is responsible and accountable for the use of the funds provided and for the performance of the grant-supported project or activities. The grantee is the entire legal entity even if a particular component is designated in the award document. The grantee is legally responsible and accountable for the performance and financial aspects of the grant-supported project or activity. (NIH)

A *grantee* is the organization or other entity that receives a grant and assumes legal and financial responsibility and accountability both for the awarded funds and for the performance of the grant-supported activity. Grants are normally made to organizations rather than to individual principal investigator/project director(s). (NSF)

◆ **Cooperative Agreement**

A support mechanism used when there will be substantial federal scientific or programmatic involvement. Substantial involvement means that, after award, scientific or program staff will assist, guide, coordinate, or participate in project activities. (NIH)

A type of assistance award which should be used when substantial agency involvement is anticipated during the project performance period. Substantial agency involvement may be necessary when an activity is technically and/or managerially complex and requires extensive or close coordination between the agency and the awardee. Examples of projects which might be suitable for cooperative agreements if there will be substantial agency involvement are:
research centers, large curriculum projects, multi-user facilities, projects which involve complex subcontracting, construction or operations of major in-house university facilities and major instrumentation development. (NSF)

♦ Contract (R&D)

An award instrument establishing a binding legal procurement relationship between the agency and a recipient obligating the latter to furnish a product or service defined in detail by the agency and binding the agency to pay for it. (NIH)

♦ Cooperative Research and Development Agreement (CRADA)

Any agreement between one or more NIH laboratories and one or more non-federal parties under which the Public Health Service, through its laboratories, provides personnel, services, facilities, equipment, or other resources with or without reimbursement (but not funds to non-federal parties) and the non-federal parties provide funds, personnel, services, facilities, equipment, or other resources toward the conduct of specified research or development efforts which are consistent with the missions of the laboratory. (NIH)

Hiring a new employee is an opportunity and dilemma for which few of us are prepared. Inevitably, we are placed in the position of defining what it is that our offices do and what tasks will be included in the position. The uncertainty of the situation is perhaps the most problematic. How can we know that we have hired the “right” person? Can we learn enough during the interview to generalize the “results” to ensure a good fit in the office and institution?

Is humor a mandatory qualification or just a desirable quality?

In a recent PUI discussion, John Falconer (University of Nebraska at Kearney) offered that “…everything you are looking for has to be connected to the job…” While many PUIers lobbied for a sense of humor as a desirable trait, others put “good sense of humor” explicitly in the job descriptions. The interviewers at those institutions also discuss the sense of humor in detail during the interviews with candidates, and give it some context. The responses of the candidates give you some added and beneficial insight into the person who is being interviewed. Say the major proponents of this approach, “We’re serious about one’s sense of humor!!!,” and “There are so many wonderful, interesting, nutty, exciting, nerve-wracking and frustrating people and situations that we deal with — a sense of humor is often the only thing that gets you through the day!”

On the other hand, several other more cautious PUIers acknowledged that “sense of humor” could not be specified in the job posting itself. Rather, the wording would need to suggest that the successful candidate should have a balanced perspective, flexibility, and cheerfulness. Such wording then allows for the qualities to be directly linked to one of the aspects of the job. In one example, it was clear that a good sense of humor was very useful. At one unnamed PUI, two U.S. Department of Education grants were awarded. “Good news! Congratulations!” you say. But wait! The principal investigator no longer works there? And no internal approvals were obtained before submitting the grant? So the good news is really bad news, requiring a sponsored research administration sense of humor!

What other qualities and qualifications are sought?

The most commonly cited qualities that research administrators value in employees include

- loving to work with other people;
- ability to handle difficult people and situations;
- ability to put the needs of the office before needs of self on most occasions;

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1 This article is reprinted from the *NCURA Magazine*, Vol. XXXVIII, No. 5, Dec. 2006/Jan. 2007, published by the National Council of University Research Administrators. It is used with permission of the publisher. At the time of publication, Frances Jeffries served as special assistant to the provost, Wheaton College.
ability to “multi-task”;  
outstanding character;  
terrific personality;  
delivers excellent customer service;  
use of good judgment;  
ability to have fun;  
care and attention to detail; and  
discretion (especially able to keep confidences).

The majority of research administrators concurred that most technical skills can be taught to new employees if they are inclined to pay attention to details.

What tools and techniques help you gather the most useful and valid information?

The most helpful tools often come from among “our own.” The favorite interview question offered by Frannie Nuttall (West Texas A&M University) is “Briefly, tell me about a time when you had a situation with a difficult client/boss and how did you handle the situation?” The tough part for the interviewer is to sit quietly and let the interviewee talk. Most people are extremely uncomfortable with the silence and begin almost immediately to fill it. The interviewer will be surprised at what the candidate will say, allowing you to discern much from their response. But a word of caution: if the candidate says, “I’ve never had such a situation” — pass them by!

Beth Koenig at the College of St. Catherine shared the following questions to use in an interview:

- Why are you interested in this position at this time? How does it fit into your overall career plan?
- What do you enjoy most about being in an academic environment?
- This position often needs to work with excel spreadsheets and computer applications other than word processing and lotus notes. How are your computer skills? Do you like fiddling around with new programs? Do you have any experience working with web pages?
- How would you go about establishing relationships and working with critical/difficult people?
- Describe a difficult situation you have been in with a faculty member and how did you handle it?
- How would your current supervisor describe your work?
- What do you need from a supervisor? (Working style, etc.?)
- What kinds of things typically frustrate you? What kinds of things typically drive you crazy?
What do you need to make you feel satisfied in a job?
What questions do you have for me?

Good luck in your hiring!
This section includes statistics and survey results from reputable sources relating to sponsored programs offices and their functions and activities at predominately undergraduate institutions (PUIs).

**Benchmarking the Small Sponsored Programs Office**

By Nancy Kay Peterson, Director of Grants & Sponsored Projects, Winona State University

In fall 2003, Winona State University (WSU), in southeastern Minnesota, embarked on an institutionwide planning effort to develop a “new university.” Faculty and staff set out to identify “best practices” nationwide in all areas of operations and conducted a Web search for benchmarking data on sponsored programs offices. Only a single national sponsored projects administration survey was found, one conducted by the Higher Education Benchmarking Consortium (HEBC) (www.higheredbenchmarking.com).

Of the 51 respondents to the HEBC survey, 17 fit in the “small” category, which was defined as annual sponsored programs expenditures of less than $43 million. Other data indicated the survey participants represented large research institutions, not teaching institutions (for example, a median of 43 percent of faculty working as PIs, a median pre-award sponsored programs staff of 11, etc.).

WSU did not seem to fit the profile as outlined by HEBC: in its best years it brings in slightly more than $2 million in grant dollars, representing at most about 8 percent of the faculty. The sponsored programs office consists of one FTE (full-time equivalent staff person), a half-time assistant, and an eight-hours-per-week work study student. Clearly, benchmarking WSU against the “small” institutions in the HEBC study would be a case of comparing apples and onions.

**The Survey**

The decision was made to collect new benchmarking data. In email consultations with a representative of the HEBC and a colleague at another Minnesota state university, a two-page “Small Shop Zip Survey” was designed to collect general comparison data from directors of “small shops” — sponsored programs offices in predominantly undergraduate institutions where faculty are hired to be teachers, not researchers, and grant seeking tends to focus on curriculum or faculty development, instrument acquisition, or special projects, rather than pure research.

The survey was distributed to the RESADM-L listserv (1,568 subscribers) and NCURA (National Council of University Research Administrators) Region IV (including the states of IL, IN, IA, KS, MI, MN, MO, NE, ND, OH, SD, and WI) listservs.

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1 This discussion is based on material presented at the NCURA Annual Meeting, October 31, 2005.
Surveys were also distributed at the NCURA annual conference in Washington D.C., on November 2–5, 2004.

Upon analyzing the 41 surveys returned, it became clear that missing were two key pieces of data — number of full-time faculty (necessary to calculate student-to-faculty ratios) and teaching load (because faculty often site this as the reason they don’t have enough time to write grants). Since most respondents had sent in their original surveys via email, they were re-contacted via email with follow-up questions. A total of 31 of the 41 institutions responded to a request for information on the number of full-time faculty and 17 institutions responded to a later request for information on faculty load.

**The Respondents**

Responses were received from four doctoral, 22 masters, and 15 baccalaureate institutions. (See Figure 2360.1-1.) The pool contained 23 public institutions and 18 private institutions, 11 of which had a religious affiliation. Enrollments ranged from 1,100 to 15,000 with a median enrollment of 5,300. The number of full-time faculty (reported by 31 institutions) ranged from 96-660, with a median of 261. The student-to-full-time faculty ratio ranged from nine-25, with a median of 22. Institutional operating budgets reported for 31 institutions ranged from $10 million to $275 million with a median of $68 million. Reported income from external sponsors ranged from $430,000 to $30.5 million. The median income was $2.5 million.

**Figure 2360.1-1: Overview of Survey Respondents**

<table>
<thead>
<tr>
<th>All institutions (Total: 41)</th>
<th>4 doctoral institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 masters institutions</td>
</tr>
<tr>
<td></td>
<td>15 baccalaureate institutions</td>
</tr>
<tr>
<td></td>
<td>23 public institutions</td>
</tr>
<tr>
<td></td>
<td>18 private institutions</td>
</tr>
<tr>
<td>Median enrollment</td>
<td>5,300</td>
</tr>
<tr>
<td>Median FTE faculty (31 institutions)</td>
<td>261</td>
</tr>
<tr>
<td>Median student-faculty ratio</td>
<td>22</td>
</tr>
<tr>
<td>Median institutional operating budget (31 institutions)</td>
<td>$68 million</td>
</tr>
<tr>
<td>Median external support</td>
<td>$2.5 million</td>
</tr>
<tr>
<td>Median sponsored program staff</td>
<td>2</td>
</tr>
</tbody>
</table>
Total sponsored programs staff ranged from one half-time position to an FTE of 14, with a median of two. Twenty-four reported having a staff FTE of two or less. Only nine institutions reported having more than three FTE staff members. (Note: The reported staff figures may be inconsistent. Some offices did not appear to include student workers in their staff totals while others did. It was also unverifiable whether directors included themselves in their total staff counts.)

In essence, given the external income level and the small staff sizes reported, a clear majority of “Zip Survey” respondents appeared to fit the targeted comparison group; that is, they represented “small shops” in terms of sponsored programs income and number of staff. Furthermore, they were primarily teaching institutions. Respondents were asked to provide a breakdown of grants received for “special projects (e.g., special projects, curriculum/program development, service activities)” vs. “research awards (e.g., independent research projects, scholarly and creative activities).” Of the 19 institutions providing a breakdown, only two reported receiving more research awards than sponsored projects awards, and both of these institutions had very low levels of overall activity, receiving only 14 and 15 awards annually.

**The Sponsored Programs Offices**

All offices in the study had pre-award responsibilities, that is, their primary function was the identification of funding sources and the facilitation of proposal submissions. (See Figure 2360.1-2.) However, 82 percent were also responsible for regulatory compliance functions (policy development, regulatory advising and monitoring, etc.). Some 80 percent were working in the regulatory area of human subjects protections, 44 percent in animal care and use, and 20 percent in biohazards. Other compliance areas included financial conflicts of interests, misconduct in research, responsible conduct in research, and chemical and radiation safety. Half of the offices also had some post-award duties (issuing contracts, monitoring budgets, preparing financial reports), and approximately one-third were involved in the preparation of contracts for fees for services and deliverable products. Half also reported being responsible for internal award programs, such as institution-supported grants and affiliated foundation awards to faculty.
Figure 2360.1-2: Overview of Offices of Sponsored Programs/Activities at Respondent Institutions

<table>
<thead>
<tr>
<th>Pre-award services</th>
<th>100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(identifying funding sources and facilitating proposal submissions)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Regulatory compliance functions</th>
<th>82%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(policy development, regulatory advising and monitoring, etc.)</td>
<td></td>
</tr>
<tr>
<td>● Human subjects protection/IRB</td>
<td>80%</td>
</tr>
<tr>
<td>● IACUC</td>
<td>44%</td>
</tr>
<tr>
<td>● Biohazards</td>
<td>20%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Post-award responsibilities</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(issuing contracts, monitoring budgets, preparing financial reports)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Preparation of contracts</th>
<th>33%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(for fees for services and deliverable products)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Oversight of internal award programs</th>
<th>50%</th>
</tr>
</thead>
<tbody>
<tr>
<td>(such as institution-supported grants and affiliated foundation awards to faculty)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Operating budget (median)</th>
<th>$10,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>(not including salaries and not based on the entire sample)</td>
<td></td>
</tr>
</tbody>
</table>

Staff size did not seem to be related to responsibilities assigned to the offices, though two of the three largest offices, reporting FTE staffing of 10.5 and 11.5, also reported handling 100 and 150 contracts, respectively, as well as having responsibilities for a significant number of post-award duties. They handled many accounting functions often housed in a business office or comptroller’s office.

Of the 33 institutions reporting operating budget figures for their offices, two-thirds reported figures that appeared to include salaries, making comparisons difficult, especially given the uncertainties about the staffing numbers. Figures obviously not including salaries ranged from $6,000–$18,000, with a median of $10,000. While 20 offices (most in public institutions) reported receiving a share of facilities and administrative (F&A) costs, only half (11) reported the amount was determined as a total percentage of F&A funds received. Amounts of $10,000–$800,000 were allocated to sponsored projects offices without explanation or “as needed” or in percentages ranging from 10–50 percent of the total F&A costs received.

Data was not collected on whether sponsored programs offices receiving F&A dollars used them to cover salaries, basic operating expenses, or for other purposes (internal grants, grant writing incentives, grant matching funds, etc.).

**Benchmarking.** Most sponsored programs offices self-assess by monitoring activity levels (the number of proposals submitted) and income levels (dollars received). (See Figure 2360.1-3.) For comparative purposes, the number of proposals submitted was
defined as the grand total of the number of submitted pre-proposals, new proposals and non-competitive continuing proposals. The total number submitted ranged from nine–385. The median number submitted was 60. In terms of external dollars received, the median was $2.5 million. Some offices also monitor success rates. In this study, the median success rate was 56 percent.

Figure 2360.1-3: Overall Benchmarks

| Median # of proposals submitted annually | 60 |
| Median success rate                      | 56% |
| Median amount of external dollars received annually | $2.5 million |

Findings at a Glance
The survey data indicates, in roughly decreasing order of significance the following:

◆ The more proposals submitted, the more dollars received.
◆ The larger the number of full-time faculty, the more dollars received.
◆ The greater the success rate, the more dollars received.
◆ The more incentives offered, the more dollars received.
◆ At institutions with the sponsored programs office located in academic offices, more dollars were received.
◆ The student-to-full-time-faculty ratio does not appear to be related to dollars received.
◆ Lower faculty teaching loads do not appear to be related to dollars received. In fact, institutions with lower faculty loads were slightly less likely to be in the upper tiers in terms of dollars received.

The first three findings appear to be simply a matter of common sense. More proposals, more faculty, and higher success rates equal more dollars. That leaves four findings to consider further:

◆ Role of incentives
◆ Student-to-faculty ratio
◆ Faculty load
◆ Reporting lines

Role of Incentives. The more incentives offered, the more dollars received. The five most common incentives, regardless of the institution’s success (in terms of dollars received) were, in order:
◆ Portion of facilities & administrative (F&A) costs received returned to project
director, department and/or college
◆ Recognition given (e.g., certificates, receptions, internal publications)
◆ Grant writing activities considered in promotion and tenure decisions
◆ System for securing cost share (matching funds) is grant writer friendly
◆ Release time given for grant administration

Some 35 percent of the institutions that were at or above the median in terms of
dollars received also provided additional incentives, such as release time for grant
writing activities, stipends for grant writing (either directly or through internal competi-
tions), seed money for preliminary research, stipends for grant administration (often
only through grant awards) and travel to technical assistance workshops or funding
agency offices. (See Figure 2360.1-4.)

<table>
<thead>
<tr>
<th>Figure 2360.1-4: Most-Effective Incentives Offered by Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Of those institutions that were at or above the median in dollars received —</td>
</tr>
<tr>
<td>♦ 3 offered grant writing release time</td>
</tr>
<tr>
<td>♦ 1 offered grant writing stipends</td>
</tr>
<tr>
<td>♦ 5 offered both release time and stipends</td>
</tr>
<tr>
<td>BUT</td>
</tr>
<tr>
<td>♦ 7 of these 9 offered 4 or more incentives</td>
</tr>
<tr>
<td>♦ 4 of these 9 offered 7 or more</td>
</tr>
</tbody>
</table>

Interestingly, the five most common incentives may not be the most effective. All
nine of the institutions that offered either release time for grant writing or stipends for
grant writing or both (five offered both) were at or above the median for dollars re-
ceived. However seven of those nine institutions offered four or more incentives and
four offered seven or more. It is difficult to accurately gauge the effectiveness of one
incentive over another. The key conclusion is the more incentives offered, the more dollars
received.

**Reporting Lines.** Of the 10 out of 41 institutions in which the sponsored programs
officer reported to other than an academic officer, five were in the lowest quadrant in
terms of dollars received. The others were spread out evenly across the spectrum of
income levels. One could speculate that sponsored program staff who are assigned to
development/institutional advancement or foundation offices spend time on other
fund-raising efforts besides grant writing, but data was not collected that could confirm
that suspicion.
**Student-Faculty Ratio and Faculty Load.** Perhaps surprising, the survey did not find a connection between student-faculty ratio or teaching load and grant writing dollars received (nor number of proposals submitted nor success rate).²

It could be that institutions with low student-faculty ratios and low faculty teaching loads may place a greater emphasis on personalized learning and student-faculty interaction inside and outside the classroom. Faculty may be expected to be heavily involved in student and community activities as part of their scope of duties. The emphasis on personal interaction and the intense time commitment that requires may leave little time for grant writing. But, that can’t be confirmed by the data. Another problem is teaching load in and of itself may not reflect total faculty workload. Teaching load does not provide any details on other variables, such as additional faculty student advising responsibilities, committee assignments, and the credit-hour structure.³

**Conclusion**

Survey results suggest that the key to encouraging faculty grant writing is offering multiple incentives. As a corollary to the benchmarking study, a review of the professional literature was undertaken. In general, the commonly cited barriers to grant writing reported can be condensed to two shortcomings: faculty claiming to not have enough time and not receiving enough recognition. Since the study did not find a correlation between student-faculty ratio or faculty load and grant writing, it may be that recognition is the more important shortcoming. And that “recognition” may be reflected in the incentives offered grant writers. If an institution claims it values grant writing, but provides no incentives for such activities, the real “value” is clearly communicated to potential grant writers.

² This was surprising, because faculty, at least at WSU, consistently point to lack of time as a primary reason for not engaging in more grant writing. Furthermore, the author’s own office records do provide some evidence that involvement in nonteaching activities has an impact on grant writing activity levels. For example, there was a noticeable decline in activity levels at WSU prior to a quarter-to-semester term conversion, and there was another decline when WSU was engaged in its “new university” benchmarking efforts.

³ At WSU, for example, faculty are required to be student advisors. They are expected to be actively involved in university service via committee service and/or administrative assignments. These activities are in addition to their teaching load. At other institutions, some respondents noted university service was counted as part of overall faculty load, thus reducing the actual teaching load. Faculty also have claimed that credit-hour structure has an impact, that there is a difference between a faculty load of four three-credit-hour courses vs. a faculty load of three four-hour-credit courses. Again, there is no way to assess these variables.
Perhaps more important than offering incentives themselves is the fact that they are offered — the more, the better — because their presence offers tangible evidence that grant writing is valued by the institution and that the faculty who engage in grant writing are recognized and rewarded for their efforts.

Clearly more research is needed. (See Figure 2360.1-5, page 2360:8.) Better data on staff responsibilities and what office operating budgets support in the way of incentives would be useful. There was also limited data on faculty teaching load and curriculum structure and not enough information on how load was calculated at each institution. More information on how incentive programs are administered might provide a strategy for evaluating the effectiveness of one incentive over the other.

**Figure 2360.1-5: Areas for Further Exploration**

Need more specific data on
- staff responsibilities
- office operating budgets and incentives supported
- faculty teaching load
- curriculum structure
- incentives offered and how administered
- how to evaluate effectiveness of incentives

**Selected Bibliography**


Knowledge Check

AIS editors

The Q&As at ¶2390.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 2300 has been understood. Note: For the answer key for ¶2390.1, see ¶2390.3, which appears on a separate page (page 2390:5) for testing purposes. Discussion topics at ¶2390.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶2390.1 Q&As

1. A predominantly undergraduate institution (PUI)
   (a) Is usually a large research-intensive institution
   (b) Tends to place a great deal of emphasis on undergraduate instruction
   (c) Is defined as a small liberal arts institution with fewer than 5,000 students
   (d) Is defined as a publicly funded institution with fewer than 5,000 students

2. Which of the following generally is TRUE of a PUI?
   (a) Affording staff to stay on top of research compliance requirements presents no special problems for a PUI.
   (b) The concept of cost sharing presents no special problems for PUIs.
   (c) The institution often provides faculty incentives for proposal preparation and submission.
   (d) Tenure policies at PUIs frequently are heavily weighted toward research activity.

3. Institutional funding available for research-related activities typically is NOT used to
   (a) Generate quality research projects
   (b) Provide child care services for PIs to enable them to meet project proposal deadlines
   (c) Support the continuing development of existing research projects
   (d) Assist active research faculty change research direction if their project focus is no longer fundable

4. In which of the following areas of sponsored research do smaller institutions often have an advantage over larger ones:
   (a) PIs often more readily accept support from and recognize the contributions of the institution’s OSP.
(b) There are ample resources available to support research compliance.
(c) They usually have extensive graduate-programs to support research-intensive endeavors.
(d) Faculty are usually hired with extensive experience as principal investigators.

5. Efforts by smaller institutions to increase sponsored research often is limited by
   (a) The general resources available for research at the typical PUI
   (b) The location of the typical PUI
   (c) The length of the fiscal year at the typical PUI
   (d) The number of male vs. female faculty at a typical PUI

6. There are at least three schools of thought in considering research-related resource distribution at a PUI. Which of the following is NOT one of them?
   (a) Spread the resources like sowing seeds on a field and wait to see which ones germinate.
   (b) Host an internal competition to determine the most promising (and realistic) ideas for research, and then fund those that rise to the top.
   (c) Find faculty who are already involved in promising research and apply resources to their endeavors to help turn them into research “stars.”
   (d) Fund only proposals in the humanities, as there is less competition in this arena and PUIs usually have strong humanities departments.

7. Because smaller institutions often have less-experienced faculty researchers, OSP staff members are usually viewed favorably by faculty when
   (a) They facilitate and expedite research grants and contracts.
   (b) They offer to work as co-PIs on multiple PI submissions.
   (c) They demand to contribute to project proposals.
   (d) They are helpful in suggesting ways to solve the “problem” at the center of the proposal.

8. Faculty development is a term often used to include all of the following EXCEPT:
   (a) Incentives for research activity
   (b) Training in proposal writing
   (c) Ongoing education on compliance issues
   (d) Gifts from foundations
9. **What are set aside programs?**

(a) Programs developed to allot research funding to a special category of institutions or for a special program

(b) Programs developed to fund research graduate school education

(c) Programs developed to fund facility renovation

(d) Programs developed to fund equipment purchases

### 2390.2 Discussion Topics

1. What are some of the principal differences between how a PUI and a research-intensive institution view sponsored research activity? In answering, consider both the perspective of faculty and administrators.

2. Why do faculty incentives continue to be so important at a PUI?

3. Sometimes OSPs need to train their accounting and finance offices on the intricacies of a federal or nonfederal award. Why might this be so and how can an OSP help the institution’s accounting/finance staff get up to speed quickly and, further, learn to “embrace” sponsored research?

4. Why should PUIs bother to compete for sponsored research funding?

5. If you were asked to develop a strategy for expanding the research enterprise at your institution, what type of considerations would go into your strategy? Ultimately, you want to increase the total dollars in sponsored funding coming into your institution. To this end, would you look to increase the total number of proposals submitted by your institution, to expand the number of faculty submitting proposals, or both? What goal is most realistic at your institution? What specific strategies would you take to achieve each goal?

Would you look for more large awards, or simply more awards in general? Would you look to diversify your funding; that is, would you plan to expand the source of funding—federal, state, industry, foundation— that you receive? What additional compliance expertise will be needed when dealing with different types of sponsors as well as larger, likely more complicated, awards?

Do you currently have guidelines for the types of research proposals that can be submitted? How would you modify—or develop—such guidelines to accommodate a more robust research enterprise at your institution?

What additional resources will your institution need to achieve a more expansive research program as you see it? Where will the resources come from?

6. In a recent presentation, an official from the National Institutes of Health listed the following items as “compliance pitfalls”? In assessing your institution’s internal controls with respect to these compliance areas, do you think you are vulnerable in any particular area (or areas)?

   - Unallowable costs
• Misallocation of costs
• Excessive cost transfers
• Inaccurate effort reporting
• Incomplete other support
• Inadequate subrecipient monitoring
• Administrative and clerical costs
• Noncompliance with assurances and special terms and conditions of award
2390.3 Answer Key

Following are the correct answers to the questions included at ¶2390.1.

1. (b) Tends to place a great deal of emphasis on undergraduate instruction

2. (c) The institution often provides faculty incentives for proposal preparation and submission.

3. (b) Provide child care services for PIs to enable them to meet project proposal deadlines

4. (a) PIs often more readily accept support from and recognize the contributions of the institution’s OSP.

5. (a) The general resources available for research at the typical PUI

6. (d) Fund only proposals in the humanities, as there is less competition in this arena and PUIs usually have strong humanities departments.

7. (a) They facilitate and expedite research grants and contracts.

8. (d) Gifts from foundations

9. (a) Programs developed to allot research funding to a special category of institutions or for a special program
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Pre-Award Services

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Introduction
Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter covers the important functions of pre-award services and how these services foster a successful sponsored research enterprise.

It all starts with the proposal. Stephen Hansen of Southern Illinois University Edwardsville goes back to the origins of research administration in colleges and universities to discuss the organization and structure of pre-award services. Research administration offices as we know them today generally began as the place where proposals were reviewed, approved, and submitted. In many cases, particularly in smaller institutions, the pre-award offices also provided direct assistance to the faculty in producing, i.e., typing and duplicating, the proposals.

Hansen identifies and describes the fundamental purposes of the pre-award office as providing support to the faculty, facilitating the grant process, and mediating among the interests of the investigator, the institution, and the sponsor. These fundamental attributes of the pre-award organization have not changed in a significant way over the past half-century. Of course, Hansen acknowledges that the methods by which many of these services are provided have changed dramatically over the years and will likely continue to evolve. At the heart of the process, however, is Raymond Woodrow’s notion that research administration, including pre-award services, is the management for research, not the management of research.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to §2505, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at §2520), practical tools (at §2530), case studies (at §2540), and trends data and other related statistics (at §2560). A “knowledge check” containing Q&As and discussion topics is included at §2590.
Pre-Award Services
Stephen Hansen
Associate Provost for Research and Dean, Graduate School
Southern Illinois University Edwardsville

Pre-award services are the activities and processes that legally and ethically enable faculty to obtain externally funded research and sponsored programs. The exact nature of those services varies, depending upon the size of the institution, its culture, and mission. Generally, however, pre-award services include:

◆ assisting with proposal development;
◆ reviewing and approving proposals;
◆ managing the proposal submission process; and
◆ negotiating, accepting, and activating an award.¹

Pre-award services have changed over time. Functions in pre-award offices three decades ago were far less specialized than today. In 1982, for example, Kenneth L. Beasley described the typical pre-award office as having a staff that included a person to help with grant budgets, a person who managed grant information, a person who helped develop proposals, and a person who managed the grant submission process.² Today functions, processes, and staffing are significantly more complex. For example, the changing legal and regulatory environment has led some universities to develop specialized pre-award activities to include areas such as material transfer agreements, subaward negotiations, and legal and ethical compliance.³

This chapter includes an overview of the functions and types of pre-award services typically provided by universities. Some of the more specialized functions that are part of some pre-award offices, such as compliance, intellectual property, subawards, and training, are excluded from this discussion because they are covered in separate chapters of the Guide. (See Chapters 1500, 1900, 3700, and 1100, respectively.) This chapter also discusses organizational and staffing models for pre-award functions and some issues and factors critical for successfully managing these functions. Special issues for predominantly undergraduate institutions also are covered.

Readers should note that the discussions throughout this section focus on the functions — not the processes — of pre-award services.


Summary of Pre-Award Services

Regardless of the degree of specialization in the pre-award office or the extent of the services, pre-award functions are governed by the same basic principles. The functions and processes of pre-award activities are designed to
◆ support the faculty;
◆ facilitate the grant process; and
◆ mediate among the interests of the institution, the sponsor, and the faculty.

To paraphrase Raymond J. Woodrow, pre-award services are the management for sponsored programs, not the management of sponsored programs. As one research administrator concisely stated, the job of pre-award is to "enable our faculty to submit their proposals without impediments."5

Pre-award services support the institution’s and the faculty’s capacity to obtain sponsored programs. These services are critical for helping faculty and for providing the institution with quality assurances as well as regulatory compliance. Below is a broad presentation of many of the types of pre-award services offered by universities.

◆ Proposal development: Proposal development activities include the dissemination of funding opportunities and other kinds of programs and activities designed to promote the development of grant proposals, such as grant-writing workshops. The purpose of these activities is not only to stimulate proposal writing but also to give the investigator the tools and techniques for writing proposals.

◆ Proposal assistance: Proposal assistance activities may include editorial support, budget development, and agency liaison. These activities may also involve the coordination of interdisciplinary and collaborative proposals.

◆ Proposal review and approval: Pre-award activities typically involve the review of proposals for compliance with university and sponsoring agency policies. Of special importance is the review of the proposed budget. For a number of pre-award offices, proposal review and approval also includes a review of the quality of the proposal. Lastly, these activities may involve the coordination of internal competitions when an agency limits the number of submissions from an institution.

◆ Proposal submission: Proposal submission activities include assuring that all departmental, school or college, and other approvals have been obtained for the proposal. They also include securing authorized signatures for certifications and representations. Lastly proposal submission activities typically involve the actual submission of the proposal, whether electronic or print.

◆ Award negotiation and subawards: Many pre-award offices negotiate awards and manage subawards. Associated activities include negotiating with the sponsor the

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scope of the grant, the budget, and the terms and conditions. They also may involve the process of subgranting or subcontracting with various collaborating institutions.

◆ Award acceptance: Most pre-award offices include managing the acceptance of an award, which includes securing the approvals of the key university officials, such as the department head, the dean, and grants fiscal management.

Each of these services is discussed in separate sections of this chapter, beginning on page 2505:7.

In addition to these functions, a pre-award office typically is responsible for the tracking and reporting of submissions and awards. Various offices in the university as well as some external agencies will require reports on the number of submitted and awarded proposals by agency type and discipline. The pre-award office often provides the data for these reports.

Some pre-award offices also manage competitions for university-funded research projects. Often this funding is intended as seed money to help a researcher begin a project that will lead to external support.

12505.2 Organization and Staffing

The organization and staffing of a pre-award office depend upon the institution’s culture, mission, and system of management. In some universities, many of the pre-award services are performed at the departmental level, while for other universities, all pre-award services are centralized. At still other institutions, few pre-award services are provided at all.

Organizational Models

There are a variety of organizational models for pre-award services. Figures 1-3 illustrate examples of three different university organizational structures.

For small offices of sponsored programs, pre-award functions may be managed by only one or two individuals. In Figure 1, for example, the university has a director and three support staff: a clerical person to manage the submission of proposals; a technical person for information dissemination, performance of funding searches, and database management; and a professional staff member to provide faculty assistance, such as editing.

Colleges and universities smaller than the one illustrated in Figure 1, however, may simply have the director of the office handle the functions of proposal development.

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and information dissemination while a part-time clerical person would manage proposal submission.

Large centralized pre-award offices may be organized in a variety of ways. Some universities assign pre-award staff to academic colleges/schools or disciplines. Others arrange their pre-award staff according to sponsoring agency. Each approach has advantages and disadvantages. In the example below (Figure 2), this university has organized its functions along traditional divisions of responsibility. This university employs 12 FTE (full-time-equivalent) staff, not including clerical support, to manage “proposal submission and management,” “proposal development” and “proposal assistance.” Additional staff members perform the functions of information dissemination, information technology, subawards, and internal grants.

At large decentralized universities, the pre-award office may only coordinate the information databases, the transmission of proposals, and the negotiation of
subawards. All the other pre-award functions, e.g., “proposal development” and “proposal assistance,” if performed at all, are managed at the college/school or departmental level. In Figure 3, for example, eight pre-award staff members transmit annually over 4,000 grant and contract submissions.

While most research administrators agree that every university, regardless of size and complexity, should have a central pre-award office that manages proposal review, approval, submission, negotiation, and acceptance, not all agree about the necessity and location of other pre-award services. Some research universities maintain that the faculty should already know how to prepare proposals, and consequently, do not provide editorial assistance, grant-writing workshops, and funding searches.

Other universities maintain that these pre-award support activities are an important service to the faculty. For those universities, some provide support at the departmental or college level, where the research administrator has more personal contact with the faculty member, while other universities offer those kinds of pre-award services centrally, maintaining that it is more efficient to provide the faculty with a “one-stop shop” approach to research administration. Either approach can be effective, depending upon the strength of the communication among offices and the quality of services provided.
Staffing
A review of a number of university Web sites reveals a wide variety in how universities staff their pre-award offices, as summarized below:7

◆ Some universities employ a team approach where two or three research administrators manage a proposal from “cradle to grave.” This “portfolio” approach provides the faculty member with personalized grant support.

◆ Other pre-award offices assign staff to manage all proposals for a particular sponsor. In this approach, staff is able to gain a great deal of knowledge about a specific set of agencies, which can be a significant help to faculty.

◆ A third approach is to dedicate staff to a group of academic disciplines. In this way, staff becomes familiar with the needs, funding sources, and styles of particular disciplines.

Regardless of the manner in which the staff is organized, there are some basic functions pre-award personnel typically perform. The following is a generalized typology of staffing; universities may use different titles and may assign responsibilities differently.

◆ **Budget Specialist**
  - Assists faculty in developing proposal budgets
  - Maintains current knowledge of institutional and sponsor allowable costs
  - Assists faculty with indirect cost calculations and fringe benefit rates

◆ **Proposal Development Specialist**
  - Assists faculty with proposal editing
  - Develops interdisciplinary and collaborative projects
  - Presents proposal writing and grantsmanship workshops
  - Assists faculty in developing fundable projects
  - Maintains current knowledge of funding priorities and trends

◆ **Information Specialist**
  - Maintains current knowledge of sponsor programs, priorities, and funding trends
  - Conducts funding searches for faculty
  - Assists faculty in accessing automated funding databases
  - Maintains a library of sponsor information

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7 See for example, University of Wisconsin, Madison (www.wisc.edu), University of California, Irvine (www.uci.edu), University of Kentucky (www.uky.edu), New York University (www.nyu.edu), University of Kansas (www.ku.edu), Washington University (www.wustl.edu), and Southern Illinois University Edwardsville (www.siue.edu).
• Assists with obtaining agency guidelines

◆ **Grants and Contracts Specialist**
  • Assists in the negotiation of grants and contracts
  • Assists in the preparation of subawards

◆ **Proposal Submission Specialist**
  • Submits proposals, electronically and in print
  • Assures that all approvals and compliance requirements have been secured
  • Coordinates the certifications and authorizing signatures

Regardless of how pre-award offices are organized or how they are staffed, pre-award services are intended to facilitate and expedite the grants process for the faculty. The following discussions (on pages 2505:7-13) are a broad presentation of many of the types of pre-award services offered by universities. As stated previously, the mission, size, and culture of the university determines to a large extent the exact nature of its pre-award services.

### Proposal Development

Pre-award offices cannot really initiate grant proposals. Only faculty and researchers can initiate proposals. However, pre-award offices can stimulate the development of proposals by providing a variety of activities and programs. Discussed below are four different programs employed by universities to further proposal development.

#### Dissemination of Funding Information

There is little doubt that knowledge of sponsor interests and limitations is the best basis for preparing a competitive grant proposal. Many pre-award offices, consequently, target funding information to faculty about grant opportunities, proposal deadlines, and funding priorities for a variety of potential sponsors. Today, most universities subscribe to one of the many electronic databases that automatically notify individual

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faculty of upcoming funding opportunities. In addition to this service, many pre-award offices conduct individual funding searches for faculty as well as target funding information to specific individuals.

Disseminating information to faculty may involve more than just funding opportunities. Some pre-award offices also provide information on changes in federal regulations, congressional appropriations information, and other relevant news to the faculty. Lastly many offices publish, either electronically or in print, newsletters as well as other types of publications that provide general information to the faculty and staff about grants. Regardless of the techniques employed or the kind of information disseminated, research administrators have noted the importance of disseminating funding information in helping faculty and staff members develop grant proposals.

**Faculty Workshops**

Many pre-award offices sponsor a variety of workshops for faculty and staff for the purpose of helping them develop grant skills. At a number of universities, these kinds of activities are conducted at the departmental level. Sometimes these workshops are held in conjunction with the central office. Regardless of who sponsors the workshops, typical topics cover subjects such as budget preparation, proposal submission processes, proposal review, intellectual property, and funding information.

Some universities also conduct workshops and seminars on effective proposal writing. Often these programs are targeted to junior faculty members and are more comprehensive than what can be provided in an afternoon workshop format. Universities also typically invite sponsor representatives to campus to conduct sessions for the purpose of helping researchers understand in more detail the interests of a particular agency or program.

**Internal Grant Programs**

Some pre-award offices coordinate university sponsored research programs. Typically the purpose of these dollars is to stimulate the development of external grants by helping the faculty gather data and develop preliminary results for a larger study. University sponsored research can also help as a bridge for senior faculty when funding agendas change or funding priorities shift. Regardless of the purpose, these kinds of programs can be effective tools for pre-award offices in helping faculty develop external proposals. For a number of predominantly undergraduate institutions, internal grant programs are very important components to helping faculty develop grant proposals.

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10 For example, the University of Kansas has a program entitled “Research Administration 101,” which is a 20-hour course on the fundamentals of research administration for faculty and staff. Southern Illinois University Edwardsville (SIUE) offers a five-week grant-writing program for new members of the faculty in the summer immediately following their first year of employment at SIUE.
Interdisciplinary and Institutional Proposals

A number of pre-award offices serve the important function of bringing researchers together from different disciplines to respond to either interdisciplinary or institutional funding opportunities. Bringing faculty together can be critical to the development of multi-investigator grants, such as National Institutes of Health (NIH) construction grants, center grants, and training grants. It is also important in helping investigators from different disciplines collaborate on multidisciplinary grant proposals.

 Proposal Assistance

Universities may offer a variety of proposal assistance services. While the principal investigator (PI) is responsible for the quality and veracity of a proposal, pre-award offices can offer assistance that helps investigators get their proposals ready for submission by providing editorial help and budget assistance, and by acting as an agency liaison. Providing PIs policy manuals and guides and general institutional background information also can be useful in proposal development.

Editing Services

Editing can range from line editing for grammar and syntax to commenting on a proposal’s consistency and internal logic. Editing also typically includes a check to assure that the proposal is consistent with agency guidelines. For most pre-award offices, editing is offered as a service to investigators and never as a requirement.

Budget Assistance

Nearly all pre-award offices offer some kind of assistance to the faculty in preparing grant budgets. For a number of universities, assistance with the proposal budget is provided at the departmental level. For others, the central office provides this service as well. Assistance with the budget can be very valuable for both the investigator and the institution. It can eliminate arithmetic errors, assure compliance with agency and university regulations, and resolve difficult issues such as release time and cost sharing. Equally important, budget assistance can help assure that the investigator prepares a realistic budget. A budget that fails to request an adequate amount of funds is just as fatal to a proposal as one that requests an unrealistically large sum of funding.

Agency Liaison

Pre-award offices at a majority of universities act as a liaison in some fashion between the investigator and the sponsoring agency. The pre-award office can provide a valuable service to investigators by clarifying with sponsors the agency guidelines, the funding priorities, and other information specific to a proposal. For some pre-award offices, these services also include travel funds for investigators to visit directly with potential sponsors.

It should be noted that the pre-award office agency liaison services are distinct from the functions of governmental relations. Governmental relations, often managed at the vice presidential or presidential level, are typically focused on larger university-wide concerns, as opposed to the project-specific issues addressed by the agency liaison functions of the pre-award office.
Manuals and Guides
Some pre-award offices prepare manuals for investigators as guides to services and sources of pertinent information on a variety of issues. Some manuals have basic information such as fringe benefit rates, indirect cost rates, and instructions on how to submit a proposal. Other types of guides include those on pertinent university policies — such as conflict of interest, intellectual property, and misconduct in research. Often these manuals and guides are provided on a Web site rather than in print form. Grants manuals and guides can be convenient references for faculty as they prepare proposals.

Institutional Information
A number of pre-award offices provide to investigators institutional information on the university and the region. Being given this kind of “boilerplate” information saves investigators considerable time and effort. It also serves the purpose of assuring that proposals have consistent and accurate information about the institution and the community. Boilerplate information can range from simple factual information on the institution — such as enrollment, types of academic programs, and size of research volume — to narrative descriptions about the university, its mission, academic goals, and accomplishments.

12505.5 Proposal Review and Approval
The review and approval of a proposal generally involves consideration of its quality, fiscal requirements, and compliance with university and sponsor policies and regulations. Although universities follow a variety of approaches for reviewing and approving proposals, this activity is considered the sine qua non of pre-award services.

Quality Review
Not every university considers a review of a proposal’s quality to be its responsibility, much less a service it should provide. Those pre-award offices that do review a proposal’s quality are very mindful of issues of academic freedom and research integrity. Further, since few offices have the expertise to critique a proposal’s technical merit, reviewing a proposal is typically limited to basic quality control, i.e., assurance that the proposal is clear and that it is representative of the university. Quality review is not intended to be an evaluation of the merit of a proposal. Such reviews and judgments are the responsibility of department chairs and deans.

Budget Review
Departments, schools and colleges, and the university review and approve proposal budgets. Budgets are checked for compliance with guidelines and with university policy. They are also carefully reviewed for commitment of university resources, whether those resources are the time and effort of the investigator or other forms of cost sharing, such as space. A number of issues can arise in the review of budgets, such as the commitment of university resources in the proposal narrative not reflected in the budget, a discrepancy between what a sponsor allows for costs and what the university policy permits, and the application of the appropriate F&A rate. Sometimes investigators apply the wrong F&A rate to a budget, and sometimes investigators wish to use a
lower rate for various reasons. Regardless of the circumstances, the pre-award office is responsible for assuring that the correct F&A rate is applied to the budget.

**Compliance Review**

In the review and approval of proposals by pre-award offices, proposals are checked to assurance compliance with agency and university policies. Whether emanating from the sponsor or the university, policies can be complicated and delicate. All are significant. A major task of pre-award offices is to assure that the proposal is in compliance with all relevant policies and regulations. Ethical compliance, such as the protection of human subjects and the care and use of laboratory animals, may or may not be housed in the pre-award office. Nevertheless, the pre-award office needs to know when proposals require Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC) review.

**Internal Competitions**

A number of sponsors limit the number of proposals that may be submitted from an institution to a particular competition. Often the pre-award office is charged with the responsibility of coordinating the internal competition to determine which proposal the university will submit. This task can be politically sensitive and requires careful management. Many pre-award offices rely upon a faculty committee to make the decision on which proposal is submitted by the institution.

### Proposal Submission

Proposal submission is more than the physical transmission, whether electronic or print, of a proposal to a potential sponsor. Proposal submission also involves the process of assuring that all university reviews and approvals have been obtained for the proposal. Since the university is accepting the legal responsibility for the proposal, it is critical for the pre-award office to manage carefully the reviews and approvals during the submission process.

**Obtaining Approvals**

In addition to the aspects of approval and review described above that the pre-award office independently performs, the pre-award office must assure that all relevant units have also performed those same functions. As part of the proposal submission process, the pre-award office must check that all appropriate officials have “signed off” on the proposal before it is submitted. Proposal submission includes checking to make sure that all the forms are properly completed, that the information is correct, and that the certifications and representations have been signed.

**Submission**

Prior to the 1990s, submission of proposals involved copying and mailing. Today most proposals are submitted electronically. Despite being relieved of the burden, for example, of collating 30 copies of a proposal with five extra copies of the face sheet and two extra copies of the investigator’s curriculum vitae, being careful to bind but not
staple, and rushing it to a mail service to guarantee delivery by the deadline date, submission processes remain demanding and unyielding.

The pre-award office must now understand the different electronic systems employed by various agencies and deal with interrupted Internet services as well as software and hardware issues. A number of federal agencies working with the Federal Demonstration Partnership and the Office of Management and Budget (OMB) are seeking a common federal electronic submission process through Grants.gov. Regardless of the system used, proposal submission remains a basic function of pre-award offices. (For a full discussion of electronic proposal submission and Grants.gov, see Chapter 900.)

\(\text{2505.7 Negotiation and Subawards}\)

Although a number of universities do not include the negotiation of awards and the development of subawards as part of their pre-award services, many universities do incorporate these activities into the pre-award office. Although administering contracts and subawards are discussed in separate chapters of the Guide, it is appropriate to summarize some basic points from the perspective of pre-award services. (For a full discussion of administering research contracts and subawards, see Chapters 2700 and 3700, respectively.)

**Award Negotiations**

There are three major components to negotiate in an award:

1. Scope of the research
2. Budget
3. Terms and conditions

Negotiations concerning the scope of the project must involve the investigator and must be coordinated closely with changes in the budget. The role of the pre-award office is to assure that there are no implicit or explicit obligations in the performance of the project that cannot be accomplished given the amount of time and budget. Typically the scope of a project is reduced as a result of budget decisions or cuts in funding.

The terms and conditions of an award cover a variety of issues. Patents and copyrights, termination, audits, indemnification, insurance, period of performance, cost principles, payment schedules, and financial reporting are only some of the terms and conditions that are often negotiated in an award. Depending upon the award mechanism — whether it’s a grant, contract, or cooperative agreement — and upon the sponsor — whether federal, state, or private — the terms and conditions will vary significantly. Federal grants and contracts, for example, are governed by public law, executive order, OMB circulars, agency policies, and procurement regulations, such as the Federal Acquisition Regulation (the FAR). Typically there is not much flexibility in negotiating

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\(^{11}\) Information on the Federal Demonstration Partnership can be found at its Web site: www.thefdp.org.
federal terms and conditions in grants unless it is a reduction in the budget and the scope of the work. For federal contracts, negotiations are conducted within the context of the FAR. For either grants or contracts from private organizations, foundations, and industry there is much greater flexibility and variability in negotiating terms and conditions. Additionally private and public sponsors often differ in their concern over a variety of issues ranging from intellectual property to liability and indemnification.

Negotiating all three aspects of an award — scope, budget, and terms and conditions — requires highly skilled personnel in the pre-award office. In addition, pre-award offices often will need the help of the university’s legal counsel to understand and negotiate some of the terms and conditions of a grant or contract.

**Subawards**

The development of subaward agreements between universities and other nonprofits that also operate under OMB Circular A-110 has become much simpler over the past two years because of the work of the Federal Demonstration Partnership. Regardless, it is important to have skilled individuals who can develop subaward agreements for the university. Even when making a subaward with another A-110-governed university, the grant project or the university may require special provisions or terms in the agreement. Additionally, when collaborating with other kinds of institutions, the pre-award staff needs to be aware of a variety of issues that arise with agreements, such as payment schedules, flow-down provisions, and subrecipient monitoring. (For a full discussion of subawards, see Chapter 3700.)

12505.8 **Award Acceptance**

All grants and contracts must be formally accepted by the university to complete a legal agreement between the sponsor and the university. The process by which a university accepts an award typically follows the same review and approval process the institution employs when a proposal is first submitted. The formal acceptance of the award is the signal for the activation of the project.

**Acceptance Process**

After an award notification arrives, and after the budget, the scope, and the terms and conditions have been negotiated, the pre-award office begins the formal process of coordinating the legal acceptance of the grant or contract. Just as when the proposal was first submitted, the department head and school or college dean typically review and approve the award before the central pre-award office moves the award through the remainder of the acceptance process. For some institutions, legal counsel must also review and approve the award before the authorizing institutional official accepts the award for the university.

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12 The Federal Demonstration Partnership developed a National Subaward Model Agreement Form. The Subaward Agreement Form was endorsed by the Research Business Models Subcommittee of the National Science and Technology Council in January 2005. The Subaward Model Agreement may be used by all universities and nonprofits subject to OMB Circular A-110.
Award Activation

After the authorizing institutional official has accepted the award, the pre-award office typically is responsible for activating the award. At the very least, the pre-award office should distribute copies of the award instrument and budget to relevant university offices, such as the investigator, department chair, school/college dean, and accounting office. In addition to distributing copies of the award documents, some institutions also prepare and distribute an “award summary” that highlights important award requirements.

Notifying the university that an award has been accepted may be all for which the pre-award office is responsible in terms of activating an award. For other universities, the pre-award office may be the unit that actually establishes a grant account for the award. It may also be responsible for initiating all subawards to collaborating institutions.

Issues and Factors Critical for Success

Colleges and universities offer a wide variety of pre-award services to their faculty and staff. Not all large institutions have the full range of services described above, nor are all of those services required for fostering and supporting a large volume of grants and contracts. Colleges and universities employ a variety of strategies and combinations in pre-award services that result in highly successful operations. The California Institute of Technology, for example, confines its pre-award services to proposal approval and review, proposal submission, award negotiation, and award acceptance/initiation. At the other end of the spectrum, New York University provides the full range of pre-award services with an estimated 50 percent of its staff effort devoted to proposal assistance to researchers. Between these two examples is the University of California-Irvine, which describes itself as having a partnership in pre-award services with departmental and school/college units, where the central office supplements many of the proposal assistance functions of the units but also manages the unique functions of proposal review and approval.13

Regardless of the extent of services or how those services are organized, there are some common issues and factors affecting the success of pre-award offices.

The first critical issue affecting the success of pre-award services is recognizing the important role of centralized pre-award services in all universities. Whether the institution has extensive or limited services, most research administrators recognize the importance of a centralized pre-award office to assure consistency of proposal review and approval.14 In addition to review and approval, many research administrators also

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view strong centralized pre-award services as critical because of the “accretion of regulation.” As one colleague stated, “one can’t overemphasize the importance of having a single point of contact for receiving and conveying information” about expanding rules and regulations governing research grants and contracts. The central pre-award office is the most effective unit for managing that task for the faculty.\(^{15}\)

A second issue for pre-award offices is assessing the effectiveness of their services. For example, given the rapid expansion of automated databases and their growing sophistication in identifying funding opportunities, a number of pre-award offices have begun to reassess their approaches to disseminating funding information. Since faculty can conduct their own funding searches and receive targeted electronic funding updates weekly, if they wish, many centralized pre-award offices have discovered that devoting significant time and effort to this task is ineffective and inefficient.

Another area that some pre-award offices have found to be less effective is conducting training workshops for faculty in sponsor regulations and university policies. This issue is paradoxical for a number of reasons. First, universities are educational institutions and the idea that training is ineffective is contrary to the reasons for their existence. Second, many federal agencies and higher education associations recommend, and in some cases, mandate, training programs for faculty. Nevertheless, some pre-award offices have found training programs to be ineffective for a number of reasons.

First, many faculty believe, rightly or wrongly, that their time is wasted in training sessions because grant regulations are a burden best left to professional research administrators to manage. Second, grant regulations can be esoteric, regardless of their importance, and providing effective training in a workshop format is extremely difficult. The challenge for pre-award offices is to find a productive means for providing the training investigators need to conduct their funded projects.

Service, most research administrators agree, is the element essential to success in pre-award offices. Nothing destroys the effectiveness of a pre-award office as quickly as an officious and rigidly bureaucratic staff. The pre-award office should stand as a buffer for the faculty against stifling bureaucracy, not be part of it. One research administrator stated that pre-award offices need to understand faculty requirements and find creative solutions to problems that are perceived as obstacles to their research.\(^{16}\)

All pre-award offices likely would agree that communication is the single most critical element to the success of their operation. Communication among offices, whether departmental, legal, or fiscal, is important in furthering all the elements of pre-award: developing proposals, assisting with proposals, reviewing and approving proposals, negotiating awards, and accepting awards. Communication with the faculty is equally important. Personal meetings help overcome the shortcomings of formal training, buffer against the coldness of the bureaucracy, and address the need to understand the faculty point of view.


\(^{16}\) Peggy Lowry, Oregon State University, to the author, Nov. 14, 2005.
Special Issues for Predominantly Undergraduate Institutions

The size, mission, and culture of a predominantly undergraduate institution (PUI) significantly affect the role of grants and contracts at those colleges and universities. Typically the teaching load and the promotion and tenure policies make sponsored programs more of an extramural activity that is less critical for a faculty member’s career advancement than, for example, the individual’s performance in the classroom. This role for grants and contracts impacts the pre-award office in two broadly significant ways.

First, it means that many pre-award offices need to put extra emphasis on development activities designed to stimulate grant activity. Second, the extramural role of sponsored programs means that the PUI pre-award office has fewer resources to support grant and contract activity. The impact of these two factors is that pre-award offices at PUIs may often have less technical expertise than their counterparts at large research institutions, but out of necessity, may be more broadly knowledgeable and inventive in their solutions to issues. The discussion below illustrates some of these special issues for PUIs.

Proposal Development Resources

The pre-award offices at a number of PUIs have very active and sophisticated proposal development programs. Many of these programs are designed to accomplish three basic goals. First, the purpose of many of these proposal development programs is to stimulate grant activity by providing incentives for faculty to participate in sponsored programs. Most of the incentives are intrinsic in nature, i.e., they provide recognition for the faculty member’s participation rather than monetary reward. Second, these programs are designed to provide the faculty with the technical skills necessary to obtain a grant. PUI pre-award offices, consequently, offer numerous workshops on proposal writing and budget preparation. Third, proposal development programs are designed to lower the obstacles to grant writing. Lowering the obstacles may mean providing something as simple as information on how to process a grant through the local bureaucracy to offering a more complicated program on funding searches and interpreting guidelines.

These same three goals of offering incentives, providing technical support, and lowering obstacles are reflected in many of the services of the pre-award office. These purposes are particularly evident in the manner in which many of the pre-award offices at PUIs have elaborate and sophisticated proposal development programs. Many of these programs are designed to accomplish three basic goals. First, the purpose of many of these proposal development programs is to stimulate grant activity by providing incentives for faculty to participate in sponsored programs. Most of the incentives are intrinsic in nature, i.e., they provide recognition for the faculty member’s participation rather than monetary reward. Second, these programs are designed to provide the faculty with the technical skills necessary to obtain a grant. PUI pre-award offices, consequently, offer numerous workshops on proposal writing and budget preparation. Third, proposal development programs are designed to lower the obstacles to grant writing. Lowering the obstacles may mean providing something as simple as information on how to process a grant through the local bureaucracy to offering a more complicated program on funding searches and interpreting guidelines.

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offices facilitate the grants process for the faculty. The level of personal service provided to the faculty members is often the difference between a proposal being written and submitted or not.

**Staffing and Other Resources**

The mission of undergraduate institutions naturally means most of the institutional resources are devoted to instruction. The shortage of resources, lack of adequate staff, and insufficient expertise in specific kinds of issues hamper the abilities of pre-award offices at PUIs to provide the same degree of services frequently offered by large research universities. The ability of the PUI pre-award office to overcome these obstacles often spells the difference between managing a thriving program of grants and contracts and one that remains marginal to the faculty and the institution.

One strategy employed by PUI pre-award offices is to develop partnerships with other universities. By collaborating with other undergraduate institutions or with research universities, a PUI pre-award office can find the expertise to handle a variety of issues. For example, rather than trying to develop the expertise and resources to manage human subjects compliance, the PUI pre-award office could enter into a cooperative agreement with another institution. Likewise the pre-award office could collaborate with area institutions in arranging for agency and other speakers to conduct faculty workshops.

A second strategy employed by many PUI pre-award offices is to develop a reliable network of other research administrators. Through such a network, the pre-award office can get a number of questions answered without having to develop the technical expertise itself in, for example, intellectual property or export controls. A number of helpful listservs exist for undergraduate institutions. NCURA also manages an electronic “Neighborhood” for PUIs that addresses a variety of issues for undergraduate institutions. These forums as well as developing personal networks are extremely beneficial in helping PUI pre-award offices overcome some of their special challenges. (For an in-depth discussion of special issues for PUIs, see Chapter 2300.)

**2505.11 Conclusion**

Pre-award offices, their structure and staffing, vary greatly among universities and colleges, as do the extent and nature of their services. Regardless, effective pre-award offices understand the academic context in which they operate and recognize the critical role sponsored programs play for the faculty and for the institution. Successful pre-award offices also understand above all else their critical role in managing the grant and contract process for the faculty.
This section includes expanded coverage of topics relating to pre-award administration. These materials are culled from a variety of authoritative sources.

**Reviewing the Multiple PI Option for Applications**

AIS editors

The complexity of scientific problems and the growth of interdisciplinary research are driving an increase in the number of multiple principal investigator (PI) projects being undertaken. The addition of such projects on federal grant applications arose partly in recognition of recent scientific breakthroughs involving collaborative efforts. Besides facilitating and encouraging these types of projects and research, allowing multiple PIs provides excellent training opportunities for graduate students and post-docs.

**Background**

In January 2005 the Office of Science and Technology Policy (OSTP) issued a directive to all federal agencies to allow multiple PIs on applications. OSTP’s Request for Information (RFI) to the broader scientific community, published July 2005 (70 Fed. Reg. 41226, July 18, 2005), posed a series of questions around each agency’s implementation plan.

**Agency Implementation.** In September 2007 OSTP and the Office of Management and Budget issued a “notice of policy on recognition of multiple Principal Investigators (PIs) on awards made under federal research and research-related programs” (72 Fed. Reg. 54257, Sept. 24, 2007). The policy directs federal agencies to recognize multiple PIs on research projects, but does not replace the use of the single PI when that is most appropriate for a project.

For purposes of the policy, a principal investigator is defined as the following:

A Principal Investigator is the individual(s) a research organization designates as having an appropriate level of authority and responsibility for the proper conduct of the research, including the appropriate use of funds and administrative requirements such as the submission of scientific progress reports to the agency. When an organization designates more than one PI, it identifies them as individuals who share the authority and responsibility for leading and directing the research, intellectually and logistically. The sponsoring agency does not infer any distinction in scientific stature among multiple PIs.

The policy notes that naming multiple PIs for a proposed research project “is solely at the discretion of the proposing institution(s).” Further, the policy does not intend to alter existing collaborative processes and that institutions will continue to have flexibility in such proposed arrangements.

Each agency’s implementation plan will include the following elements:
Worth Noting?

A recent study suggests fostering the multiple PI approach because it could be more productive than solo work. The study, a review of 19.9 million papers published in the past 50 years and of 2.1 million patents, found that “teams increasingly dominate solo authors in the production of knowledge. Teams typically produce more highly cited research than individuals do, and this advantage is increasing over time,” the authors report. The study, appearing in the magazine Science, provides details for the sciences and engineering, social sciences, arts and humanities, and patents. Link to abstract: www.sciencemag.org/cgi/content/abstract/1136099.
National Science Foundation

NIH Policies
The National Institutes of Health’s (NIH) creation of a multiple PI option on research grant applications culminated in February 2007 after nearly four years of discussions, task forces, directives, and requests for information (RFIs).1

NIH issued a final rule amending its regulations to revise the definition of principal investigator to include “one or more individuals designated by the grantee in the grant application . . . who is or are responsible for the scientific and technical direction of the project.” The definition of principal investigator is in section 52.2 and the conditions for multiple or concurrent awards in section 52.6, paragraph (d) of its Grants for Research Projects regulations, codified at 42 CFR part 52. The final rule, published in the November 10 Federal Register, was effective December 10, 2009.2

The change came as part of the NIH Roadmap for Medical Research (http://nihroadmap.nih.gov). The change is also in keeping with the January 2005 directive from the Office of Science and Technology Policy to all federal research agencies.

AAMC’s Recommendations. In response to OSTP’s RFI in July 2005, the Association of American Medical Colleges (AAMC) stated support for the definition of principal investigators as “individuals who share the major authority and responsibility for leading and directing the project, intellectually and logistically.”3 Offering linked awards directly from federal agencies in contrast to a subcontract model for PIs at different institutions was also encouraged by the association. However, AAMC added that there are some instances where a subcontract arrangement would serve as a more

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effective arrangement for certain projects, such as those where a secondary institution
does not have a PI and makes a limited scientific contribution. AAMC strongly sup-
ported a proposal that agencies’ databases track apportionment of research project
budgets to the leaders of the project team.

Specific Requirements. Applicants and their institutions may identify more than
one PI to NIH in most research grant applications submitted electronically through
Grants.gov using the SF424 R&R application package. Grant applications that cur-
cently accommodate more than one PI include: R01, R03, R13/U13, R15, R18/U18,
R21, R21/R33, R25, R33, R34, R41, R42, R43, and R44 (see http://era.nih.gov/Elec-
tronicReceipt/strategy_timeline.htm). Applications that still do not allow more than
a single PI are individual career awards (K08, K23, etc.), individual fellowships (F31,
F32, etc.), dissertation grants (R36), director’s pioneer awards (DP1), and Construc-
tion Grants (C06/UC6), Grants for Repair, Renovation and Modernization of Exist-
ing Research Facilities (G20) and Shared Instrumentation Grants (S10). The restric-
tion to a single PI will be described in announcements for those programs. Multiple
PIs may be identified on some paper applications submitted on PHS 398 application
forms, however, the multiple PI option must be clearly specified in the Request for
Applications or Program Announcement.

Awards involving PIs at different institutions will be managed using a subcon-
tract model. Developing a system of linked awards is under NIH consideration.
A Web site specific to NIH’s multiple PI implementation is accessible at http://

Department Rankings. NIH tracks its funding of medical research and other
support and annually compiles this information. NIH has announced that it will no
longer provide comparative ranking tables on its medical research funding. Instead,
it has developed a Web-based tool that allows institutions to access the data. The
tool also allows for downloading aggregate data, on a per fiscal year basis. Award
data is accessible through NIH’s new Reports, Data, and Analyses (RePORT) Web

According to NIH this change comes in part from responses received from the
grantee community that suggested that the current ranking tables were not neces-
sary and in part by the establishment of multiple investigator awards making the
total dollar amounts of funds received by individual departments impractical. The
rankings have been used as a recruiting tool for scientists, for internal institutional
considerations, and to compare institutions with each other, and the discontinuation
has elicited mixed responses from the academic community.

‘Team’ Science. NIH says that eligible projects for the multiple PI option include
ones that clearly require a “team science” approach. The traditional, single PI model
is not meant to be replaced by this new option. Investigators interested in applying
for an award using a multiple PI model are encouraged to discuss the proposed
project with an NIH institute or center program staff member to determine whether
a multiple PI approach may be more effective. NIH says the multiple PI model
is not synonymous with “big science,” and that a project can include as few as
two PIs. However, there is no limit on the number of PIs allowed. NIH adds that the organizational structure and governance of the project director/principal investigator (PD/PI) leadership team, in addition to the knowledge, skills, and experience of the individual PD/PIs will be factored into the assessment of the overall scientific merit of the application. Multiple PDs/PIs on a project share the authority and responsibility for leading and directing the project, intellectually and logistically, according to NIH.

**Contact PIs and Leadership Plans.** When applying for an award using the multiple PI model, a contact PI must be selected. The first PI listed serves as the contact PI and must be affiliated with the institution submitting the application. This PI is responsible for communication between NIH and all of the PIs; however, the individual does not assume any supreme authority or responsibility over the project. All PIs share equal responsibility in leading and directing a project.

NIH defines a PI as “the individual(s) judged by the applicant organization to have the appropriate level of authority and responsibility to direct the project or program supported by the grant. …” All listed PIs must be registered in eRA Commons with a PI role type, and all will have access to “Status” on eRA commons (see https://commons.era.nih.gov/commons). All PIs will also be listed on summary statements and notices of grant award (NOGA).

Applications with multiple PIs will contain a new section for a leadership plan following the “Research Plan” section in PHS 398 and SF 424 R&R. The plan should describe the governance and organizational structure of the research project including the following:

- rationale for multiple PI approach;
- communication plans;
- process for making decisions on scientific directions;
- procedures for resolving conflicts;
- allocation of resources;
- intellectual property issues;
- publications; and
- each PI’s administrative, technical, and scientific responsibilities for the project.

Also, any requested allocation of funds to components of the project or the associated PIs must be included in the leadership plan.

Some in the research community have noted that the exercise of completing the leadership plan should not be taken lightly. The process of developing the plan could help PIs carefully think through the process, which could help defuse any disagreements that may arise throughout the conduct of the project. Examples of leadership plans can be found at Figure 2520.1-1.
New Investigators. NIH policies on “New Investigators” will only apply when all involved PIs are classified as New Investigators. Also, the New Investigator box on the application may be checked only when all PIs involved are classified as New Investigators. The standard five review criteria will be applied to multiple PI institutions, with the following additional text applied to the “Approach” criterion: “For applications designating multiple PIs, does the Leadership Plan ensure that there will be sufficient coordination and communication among the PIs? Are the administrative plans for the management of the research project appropriate, including plans for resolving conflicts?”

Post award, NIH will track re-allocation of funds and revisions to leadership plans through the noncompeting continuation (Type 5) application.

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New Investigator Policies: NIH

- NIH policies related to new investigators will be applied to applications only when all PIs involved are classified as “new investigators.”
- The New Investigator Box on the application may be checked only when all PIs involved are classified as “new investigators.”
- For the purpose of classification as a “new investigator,” serving as a PI on a multiple PI grant will be equivalent to serving as a PI on a single PI grant.

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Figure 2520.1-1: Examples of Project Leadership Plans 
For Multiple PI NIH Grant Applications

According to NIH, for multiple PI applications, a new section for Leadership Plans (PHS 398, Section I) must be included, unless the request for application (RFA) announcement requests the information be provided in another section. There are no page limitations for Section I. Leadership Plans should address the following administrative processes and PI responsibilities:

• Roles/areas of responsibility of the PIs
• Fiscal and management coordination
• Process for making decisions on scientific direction and allocation of resources
• Data sharing and communication among investigators
• Publication and intellectual property (if needed) policies
• Procedures for resolving conflicts

Examples of Single Project Leadership Plans

Examples of Leadership Plans for single project applications (i.e., R01, R21, etc.) are provided below. (Applicants should follow any special instructions in the specific RFA/PA to ensure the requested information and format is included.)

Example 1

PI#1 and PI#2 will provide oversight of the entire Program and development and implementation of all policies, procedures, and processes. In these roles, PI#1 and PI#2 will be responsible for the implementation of the Scientific Agenda, the Leadership Plan and the specific aims and ensure that systems are in place to guarantee institutional compliance with U.S. laws, DHHS, and NIH policies including biosafety, human and animal research, data and facilities.

Specifically, PI#1 will oversee aim 1 and be responsible for all animal research approvals. PI#2 is responsible for aims 2, 3, and 4 including the implementation of all human subjects research and approvals. PI#1 will serve as contact PI and will assume fiscal and administrative management including maintaining communication among PIs and key personnel through monthly meetings. He will be responsible for communication with NIH and submission of annual reports. The responsibilities of the contact PI will be rotated to PI #2 in even years of the grant award. Publication authorship will be based on the relative scientific contributions of the PIs and key personnel.

Example 2

PI#1 at Institution A will be responsible for the oversight and coordination of project management for aim 1 involving the molecular design and production of vectors expressing tumor specific antigens. PI#2 at Institution B will be responsible for aims 2 and 3 including the in vivo and in vitro testing of vaccines. Each PI will be responsible for his own fiscal and research administration.

The PIs will communicate weekly, either by phone, e-mail, or in person, to discuss experimental design, data analysis, and all administrative responsibilities. All PIs will share their respective research results with other PIs, key personnel, and consultants. They will work together to discuss any changes in the direction of the research projects and the reprogramming of funds, if necessary. A publication policy will be established based on the relative scientific contributions of the PIs and key personnel. PI#1 will serve as contact PI and be responsible for submission of progress reports to NIH and all communication.

Intellectual Property. The Technology Transfer Offices at Institutions A and B will be responsible for preparing and negotiating an agreement for the conduct of the research, including any intellectual property. An Intellectual Property Committee composed of representatives from each institution that is part of the grant award will be formed to work together to ensure the intellectual property developed by the PIs is protected according to the policies established in the agreement.

continued
Figure 2520.1-1 (continued)

Conflict Resolution. If a potential conflict develops, the PIs shall meet and attempt to resolve the dispute. If they fail to resolve the dispute, the disagreement shall be referred to an arbitration committee consisting of one impartial senior executive from each PI’s institution and a third impartial senior executive mutually agreed upon by both PIs. No members of the arbitration committee will be directly involved in the research grant or disagreement.

Change in PI Location. If a PI moves to a new institution, attempts will be made to transfer the relevant portion of the grant to the new institution. In the event that a PI cannot carry out his/her duties, a new PI will be recruited as a replacement at one of the participating institutions.

Example 3

PI#1, PI#2, and PI#3 will serve as PIs for the project. PI#1 will be responsible for the gene expression studies. He will supervise Technician #1 for all microarrays. PI#2 will be responsible for the endothelial cell studies and flow cytometry studies proposed in the grant. She will supervise the Technician #2 at 50% effort for the flow cytometry studies and the post-doc for the endothelial cell studies. PI#3 will oversee all bioinformatics work in the gene expression and flow cytometry studies and will work with PI#1 and PI#2 on all data analysis.

The PIs will form a Steering Committee (membership may include PIs, key personnel, consultants, etc.) that will manage the oversight and coordination of project management, research administration, publications and data sharing, and integration of all resources needed for the project. The Institution will subordinate the award funds and each PI will be responsible for his own budget. The Steering Committee will oversee decisions on minor changes in research direction and have the authority to reallocate funds and resources between PIs. PI#1 will serve as Chair of the Steering Committee and be responsible for communication among PIs, including meeting schedules and agendas. The position of Chair will rotate among the PIs on a yearly basis. PI#2 will be designated the contact PI and be responsible for submitting all necessary documents to NIH, including IRB approvals, and annual progress reports.

Intellectual Property. The PIs will grant necessary access rights to the pre-existing patents and or the patents potentially generated within the frame of this project for the purpose of this research project to all the other PIs and key personnel on a non-exclusive royalty-free basis. Each PI shall take appropriate measures to ensure that he/she can grant these access rights. Right in any pre-existing intellectual property will remain the property of the party that created and/or controls it.

Conflict Resolution. If a potential conflict develops, the appropriate Departmental administrators representing the PIs shall meet and attempt in good faith to settle any dispute, claim, or controversy arising out of or relating to the interpretation, performance, or breach of this disagreement. However, if the Departmental administrators fail to resolve the disagreement within thirty business days, then such disagreement shall be referred for resolution to a designated senior executive of the parties who has the authority to settle the disagreement but who is not directly involved in the disagreement.

Change in PI Location. If one of the PIs moves to a new institution, attempts will be made to transfer the relevant portion of the grant to the new institution. In the event that a PI cannot carry out his/her duties, a new PI will be recruited as a replacement, subject to the approval of the Steering Committee and the Institution.

Future Considerations. NIH may in the future implement a linked award model for multiple PI projects involving PIs located at more than one institution. A disadvantage of the subcontract model is that the prime institution has additional administrative and financial burdens. The institution must submit noncompeting and competing grant renewals. However, the linked awards model also has its disadvantages, including budget allocation based on individual PI percent effort; less control by contact PI over the leadership plan; and preparation of closeout documentation including financial statement, scientific progress, and inventions.

Another future development may concern the creation of data systems. The OSTP memo requires all agencies to make multiple PI data available in award data systems. However, no deadline has been established and agencies are at different points in this process.

Another issue that some in the research community believe needs resolution is the lack of a minimum percent effort (e.g., 15–20 percent) mandated for PIs listed on projects. Physician scientists may have limited time to commit even 10 percent, but still contribute enormous intellectual capital to an investigation. Some also contend that all PIs should have equal access to the NIH study section and recognition and add that not just a contact PI should be given this access.

NIH has indicated that it is also looking into the following with respect to multiple PI projects: (1) the ability to recognize non-PI key contributors to the project and (2) the desirability of formally apportioning funds under a grant to various components of a project or the PIs associated with those components.
**Multiple PIs at NSF**

Policies and procedures for multiple PIs on NSF applications differ slightly from NIH. NSF notes that it has permitted multiple investigators on NSF proposals since 1963. NSF defines a principal investigator as “the individual(s) designated by the proposer, and approved by NSF, who will be responsible for the scientific or technical direction of the project. NSF does not infer any distinction in scientific stature among multiple PIs, whether referred to as PI or co-PI. If more than one, the first one listed will serve as the contact PI, with whom all communications between NSF program officials and the project relating to the scientific, technical, and budgetary aspects of the project should take place. The PI and any identified co-PIs, however, will be jointly responsible for submission of the requisite project reports.”

Like NIH policy, all PIs on NSF projects share responsibility for proper conduct of the project.

**Application Information.** NSF allows a total of five PIs on projects and proposals with PIs at different institutions. Applications may be submitted as a single proposal from one institution that includes subawards information with the collaborating institutions or as a separately submitted proposal from each institution. If using by the latter method, the lead organization’s submission shall include:

- cover sheet;
- project summary;
- project description;
- references cited;
- facilities, equipment, and other resources for the lead organization;
- biographical sketches for senior personnel from the lead organization;
- current and pending support for senior personnel from the lead organization; and
- budget and budget justification for the lead organization.

The nonlead organizations shall include in the application all except the project summary, project description, and references cited. The NSF FastLane system combines separate proposals into a single one for review purposes (www.fastlane.nsf.gov). PIs may use FastLane to access review and award information and check the status of pending actions. In NSF applications, a separate management plan for allocating funds among PIs is not required unless mandated in the funding opportunity. According to the NSF, there has been a steady increase in the fraction of proposals received, of awards made, and of the agency’s budget invested in multiple PI projects over the past two decades. However, single PI proposals still enjoy a higher success rate, according to the agency.

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5 See the NSF “Grant Proposal Guide” (NSF 10-1) available online at www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/nsf10_1.pdf.
Additional Considerations

The deployment of a multiple PI option on federal award applications at federal agencies brings forth a host of considerations about how to handle matters such as internal credit, allocation of funds, leadership plans, and reports.

Universities should consider whether to use double-counting or allocation to recognize PIs in reports. In the double-counting method, each investigator is credited in reports with the full amount of the award. With the allocation option, each investigator is allocated a portion of the award, which could be based on projected expenditures or on intellectual contribution or effort or responsibility. NIH suggests that the intellectual allocation method is more realistic. The allocation timing is important if intellectual contribution is used. An institution may require allocation at the time of proposal submission, as opposed to award time, since it is often easier to get agreement for the future than the present.

Internal credit policies will also affect the financial accounting of awards. Universities must decide whether to establish separate accounts, or create one account with percentage allocations on its reports. The financial system should have the ability to track percentage allocations. NIH says that if the allocation method is used, the allocation will be noted as a footnote to the grant award, and the institution retains the right to rebudget among allocations as necessary.

Institutions should consider how the data from the credit and allocation methods will be used in promotion and tenure processes, in addition to space allocation. Universities need to establish standards for leadership plans, and they should address in the plans whether one investigator will be responsible for the finalization and completion of any required reports for NIH. A reminder: The agency says that all PIs share equal responsibility and that a designation of a lead PI is only for communication purposes. However, addressing upfront the responsibility of drafting and completing reports is helpful for all PIs involved in a project.
Reporting Financial Support from Other Sources — Overview and Risk Assessment

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The reporting of financial support from other sources is a risk area that has not been the focal point of any of the recently reported federal investigations of universities and research institutions, but the issue nonetheless deserves close attention, if only because the potential risks of systematic noncompliance are very high and the consequences may be severe.

This purpose of this article is to provide an overview of the applicable federal rules and to identify the issues that present the greatest problems for grantees. This article addresses the reporting of research support from other sources as required by the policies of the National Institutes of Health (NIH).

NIH Policy Guidance on the Reporting of ‘Other Support’

When applying for an award from NIH, the applicant must report all active and pending sources of other financial support for the research projects of the key personnel listed in the grant application. “Active” support includes funded research projects on which the researcher is currently working. “Pending” support refers to proposed research projects to which the researcher intends to devote effort if they are funded. Key personnel include the principal investigator (PI) and other individuals “who contribute to the scientific development or execution of a project in a substantive, measurable way, whether or not they receive salaries or compensation under the grant.”

NIH defines this category of funding from other sources (commonly referred to as “other support”) to include

all financial resources, whether federal, non-federal, commercial or institutional, available in direct support of an individual’s research endeavors, including, but not limited to, research grants, cooperative agreements, contracts, and/or institutional awards. Training awards, prizes, or gifts are not included.

Applicants must submit complete and up-to-date other support information for key personnel (excluding consultants) before an award may be made. Pursuant to NIH’s “just-in-time” procedures, other support information is submitted upon the request of NIH staff when the award application is under consideration for funding. Once an award is funded, grantees must report any changes in other support for key personnel as part of the annual progress report to NIH.

The reporting of other support at the initial application phase helps the NIH awarding officials to assess whether federal dollars should be awarded to the applicant for the proposed research, or whether because of budgetary, commitment, or scientific overlap, federal investment in the project is unwarranted. NIH does not permit overlap of any kind. By identifying and eliminating overlap, NIH aims to ensure the following:

1. Sufficient and appropriate levels of effort are committed to the project.
2. There is no duplication of funding for scientific aims, specific budgetary items, or an individual’s level of effort.
3. Only funds necessary to the conduct of the approved project are included in the award.\(^3\)

### Three Overlap Categories

NIH has identified three different categories of overlap — (1) commitment, (2) budgetary, and (3) scientific — and defined them as explained below.

- **Commitment Overlap.** Commitment overlap occurs when an individual’s time commitment to research projects exceeds 100 percent, regardless of whether salary is requested for that individual in the application. This rule is consistent with NIH’s overall requirement that no individual on the project is permitted to have commitments exceeding 100 percent of total effort.

- **Budgetary Overlap.** Budgetary overlap occurs when an application includes budgetary items, such as equipment or salary, that have already been provided for by another source.

- **Scientific Overlap.** Scientific overlap occurs when “(1) substantially the same research is proposed in more than one application or is submitted to two or more different funding sources for review and funding consideration, or (2) a specific research objective and the research design for accomplishing that objective are the same or closely related in two or more applications or awards, regardless of funding source.”\(^4\)

NIH instructs individuals to include a summary of whether an active or pending award overlaps in scientific, budgetary, or commitment terms with the work proposed in the application. If there is no overlap, a simple statement indicating as much will be sufficient.

If there is overlap, the applicant should include an explanation of how the overlap would be eliminated should the application be funded. NIH staff members consult with the principal investigator and other applicant institution officials to resolve any overlap issues at the time an award is made. Annual reporting of changes in other support for key personnel by the grantee to NIH helps to ensure that overlap does not become an issue in later grant budget periods.

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\(^3\) Id.
\(^4\) Id.
Compliance Risks

As the Office of Inspector General (OIG) in the Department of Health and Human Services (HHS) noted in its November 2005 proposed guidance on compliance programs, material misrepresenting other support information or failing to provide other support information could subject an institution to civil or criminal fraud liability under the False Claims Act or other fraud statutes. Both the principal investigator and representative of the applicant institution certify that the grant application, including just-in-time submissions, contain true, complete, and accurate information. In its proposed compliance guidance, the HHS OIG characterized the provision of “complete and accurate” other support information as “critical” to an awarding agency’s ability to determine whether a particular application should receive funding.

Risk to Entire Award. Unlike effort reporting or cost allocation errors, which generally result only in disallowance of particular unsupported charges to an award, misrepresenting other support could put the entire award at risk. To the extent that an applicant’s misrepresentation of other support information prevents an agency from recognizing scientific overlap — an issue that potentially could cause the agency to modify the award or not fund it at all — it is conceivable that federal officials would deem the entire award invalid.

The Scope of ‘Other Support’ Reporting

The scope of the “other support” reporting requirement is quite broad but does have some limits.

Research Endeavors. First, NIH requires applicants to list only other sources of financial support related to individuals’ “research endeavors.” As the NIH policy guidance makes clear, the reporting of other support does not include salary or compensation received for teaching, training, or other non-research endeavors.

Second, the NIH grant application instructions indicate that an individual researcher should list all research endeavors in which he or she is involved, regardless of whether salary is received for any effort contributed. Specifically, the NIH instructions state that

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5 In November 2005, the HHS OIG issued a “Draft OIG Compliance Program Guidance for Recipients of PHS Research Awards” for public comment (70 Fed. Reg. 71312, Nov. 28, 2005). In June 2006, the OIG announced that it would not be going forward with issuing final guidance. (Instead, the Research Business Models Subcommittee (http://rbm.nih.gov) of the National Science and Technology Council will be developing broader, voluntary compliance guidance.) The proposed guidance is still valuable to review, however, in that it sets forth the OIG’s “general views on the value and fundamental principles of compliance programs for colleges and universities and other recipients of PHS awards for biomedical and behavioral research and the specific elements that these award recipients should consider when developing and implementing an effective compliance program.”

6 At NSF, the OIG has been known to suggest that the misrepresentation of other support may constitute scientific misconduct, because it is a misstatement in a proposal for an NSF award.
“[c]ommitment overlap occurs when a person’s time commitment exceeds 100 percent, whether or not salary support is requested in the application.”

While this directive appears to refer only to whether salary support is requested in the application under review, the overall objective of NIH is to use the other support information to determine whether an individual’s time commitment is greater than 100 percent. Therefore, individuals must list all research endeavors, including those for which they do not receive compensation.

This instruction may seem to be at odds with the NIH definition of “other support,” which is expressed in terms of the receipt of “financial resources,” but it is important to note that even if an individual is not receiving financial support in the form of salary for his effort on a research grant, he is likely still using the outside financial resources in the form of equipment or supplies.

Third, in the past applicant institutions and individuals may have felt obligated to report only other support that an individual researcher receives through the applicant institution. Now NIH expects applicants to report all financial support from other sources that are available to an individual researcher, even if the other support does not flow through the applicant institution, but, instead, is awarded directly to the individual researcher or to another institution with which the researcher is also associated.

This requirement puts the applicant institution in the difficult position of having to certify the accuracy of the scientific, commitment, and budgetary terms of the outside support, even though the institution itself does not hold the relevant records and is not a party to the research agreement under which that support is provided. For example, it may be difficult for the applicant institution to verify an individual’s effort spent on research grants awarded through another institution, because grantees are required to report and certify only the effort spent by an individual on activities performed directly for the institution. Consequently, time spent on “outside” research projects generally will not be included in an individual’s total institutional effort. Nonetheless, NIH at least has been quite clear in stating that key personnel must include in “other support” not only institutional awards, but also “outside” research projects funded by others.

**Reporting Clinical Trials as Other Support.** A final issue worth discussing with respect to the scope of “other support” is how an individual researcher should account for his involvement in industry-sponsored clinical trials. Many researchers are engaged in multiple industry-sponsored clinical trials, most of which require very little effort or time on the part of the researcher. It is sometimes difficult to measure precisely the effort associated with each of the clinical trials because the effort amounts are generally so small and because they vary greatly depending on the phase of a particular trial. An individual researcher may question whether it is necessary to include in his list of “other support” dozens of clinical trials in which he spends less than 1 percent of effort in any given time period.

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7 PHS 398 Instructions, Part III, p.6.
Nonetheless, NIH makes it clear that in order to comply with the reporting requirements for other support, individuals must include such clinical trials in their list of funded research endeavors. One way of doing so without listing each individual project is to report aggregate effort on the industry clinical trials as a group. This approach appears to be acceptable to NIH, as long as the aggregate effort does not exceed 10 percent. To do so, the researcher should list each clinical trial sponsor separately and provide an explanation as to why he has determined it is best to report his involvement in an aggregate form.

**Commitment and Scientific Overlap**

Given the competition for federal research dollars, it is not unusual for investigators to have multiple applications pending with different awarding agencies. While this practice is generally acceptable, there are certain guidelines that applicants must follow in order to prevent commitment and scientific overlap.

**Commitment Overlap.** As an example of commitment overlap, the OIG stated that it would be “clearly improper for researchers in award applications to separately report to three awarding agencies that they intend to spend 50 percent of their effort on each of the three awards.” The OIG seems to presume that if all three applications were awarded, there would be a clear violation of NIH’s policy that an individual’s commitments may not exceed 100 percent.

Aside from the fact that there is usually no assurance or even likelihood in such circumstances that all three proposals will be funded, this assumption ignores the interactive way in which NIH finalizes award decisions through discussion with the applicant institution and principal investigator. During this process adjustments are often made to the research proposal, including changes to level of effort for key personnel if commitment overlap is a concern. By handling the proposal review process in this way, NIH enables applicants to have multiple applications pending at one time, and doing so is acceptable as long as certain guidelines and restrictions are followed.

When submitting other support information to NIH, researchers should list the actual effort for the current budget period of active research awards. The other support information should also include all pending awards, and researchers should list their proposed effort for the initial budget period of each pending award. As explained in the NIH grant application instructions and the policy guidance regarding other support, resolution of the overlap occurs at the time of an award through discussions with the applicant institution officials, the principal investigator, and awarding agency staff.

If resolving the commitment overlap would require an individual to reduce his effort on a different NIH grant for which he is considered “key personnel,” he may need to secure advance approval from the appropriate NIH official for that award. Grantees must notify the NIH grant officer in writing if the principal investigator or other key personnel specifically named in the notice of grant award will withdraw from the project entirely, be absent from the project for a continuous period of three months or more, or reduce time devoted to the project by 25 percent or more from the
level that was approved at the time of the award. NIH must approve any alternate arrangement proposed by the grantee.\(^8\)

Finally, it is important to note that although the reporting of other support information helps NIH and grantee institutions to monitor an individual’s commitments to research projects, it does not always provide an accurate portrayal of overall effort by an individual on an institutional basis because it does not include instruction or other non-research activities. Grantee institutions should ensure through their internal proposal review procedures that the effort to which the researcher committed in a proposal is consistent with all of the researcher’s other commitments, not just his research commitments.

**Scientific Overlap.** In its discussion of reporting financial support from other sources, the HHS OIG expressed particular concern that without accurate and complete information, NIH may provide duplicate funding to a project whose research aims are already being supported by another source. NIH and the National Science Foundation (NSF) are particularly sensitive to this issue, because the two agencies sometimes have related research funding interests.\(^9\)

NIH’s policy on scientific overlap clearly prohibits applicants from proposing identical or substantially similar research projects to two or more different funding sources. The two exceptions to this general rule are K-series training awards and individual research projects that are identical to a subproject that is part of a P-series grant.

This rule does not, however, prohibit an individual from submitting applications proposing to conduct research in related but distinct parts of a larger research question. If this is the case, an applicant must take care to ensure that “a specific research objective and the research design for accomplishing that objective” are not the same or closely related in two or more applications for awards, regardless of the funding source.\(^10\) One way to help assure the awarding agency that a particular proposal is

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\(^9\) The NSF policy on “other support” is very similar to NIH, although not set out in as much detail. Although the *NSF Grant Proposal Guide* refers only to listing current and pending other “project support,” this requirement is commonly understood to refer to research activities. *NSF Grant Proposal Guide*, II. C.2.h, p. 31. Applicants should provide the total award amount (not just the initial budget period), as well as the effort devoted to the project per year. If the combined effort on current and pending research projects would exceed 100 percent effort by the researcher, he should include a statement explaining how effort would be adjusted if the pending application is funded.

\(^10\) *PHS 398 Grant Application Instructions*, Part III, p. 6.
distinct from other related proposals would be to include a brief explanation of the relationship between the two in the other support information.\textsuperscript{11}

**Issue Merits Renewed Attention**

In some respects the requirement to report “other support” is a relatively straightforward compliance matter. Upon close examination, however, the requirement is not without ambiguity. NIH considers the review of an applicant’s active and pending other-support information to be an important part of the funding decision process, as well as a method for monitoring the ongoing commitments of key personnel.

Institutions, therefore, must make it a priority to ensure that individual researchers properly include and describe all their research activities, including those only in the proposal stage. Institutional policies and procedures related to the reporting of other support should serve as a safeguard to prevent scientific, budgetary, and commitment overlap by investigators and their institutions.

\textsuperscript{11} Unlike NIH, nearly all NSF directorates permit applicants to submit the same proposal to more than one funding source. NSF explicitly states that “[c]oncurrent submission of a proposal to other organizations will not prejudice its review by NSF.” The Biological Sciences Directorate, however, will not accept proposals that are also being submitted to other federal agencies for simultaneous consideration. Presumably, awards submitted to this directorate would be the ones most likely to duplicate NIH proposals. The only exceptions to the directorate’s rule are the following: (1) when the applicants and program officers at the relevant federal agencies have already agreed to joint review and possible joint funding of the proposal, and (2) when the award is proposed by a “beginning investigator,” i.e., one who has never served as a principal investigator or co-principal investigator on a federal award. *NSF Grant Proposal Guide, “Overview,”* p. 10.
### 2520.3 Timeline for Award Decision-Making

AIS editors

The following overviews are provided as samples of the general, standard time frame necessary for a competing application to the National Science Foundation (Figure 2520.3-1) and the National Institutes of Health (Figure 2520.3-2).

**Figure 2520.3-1: NSF Proposal and Award Process**

<table>
<thead>
<tr>
<th>PHASE I – Proposal Preparation and Submission</th>
<th>PHASE II – Proposal Review and Processing</th>
<th>PHASE III – Award Processing</th>
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<tbody>
<tr>
<td><strong>Opportunity Announced.</strong> Funds opportunities are announced on the NSF Website and Grants.gov. Unsolicited proposals to specific NSF programs may be submitted at any time.</td>
<td><strong>Reviewers Selected.</strong> Reviewers are selected based on their specific and/or broad knowledge of the science and engineering fields; their broad knowledge of the infrastructure of the science and engineering enterprise, and its educational activities; and to the extent possible, diverse representation within the review group. Proposers are invited to suggest persons they believe are especially well qualified to review the proposal, as well as identify persons they would prefer not review the proposal.</td>
<td><strong>Business Review.</strong> The Grants and Agreements Officer in the Division of Grants and Agreements conducts a review of business, financial, and policy implications. Generally, DGA makes awards within 30 days after the program office makes a recommendation.</td>
</tr>
<tr>
<td><strong>Proposal Submitted.</strong> The Grant Proposal Guide is the source for guidance on preparing and submitting a proposal.</td>
<td><strong>Peer Review.</strong> All proposals are reviewed through use of the two National Science Board-approved merit review criteria: intellectual merit and broader impacts. Some solicitations may have additional criteria. Reviewers’ analyses and evaluation of the proposal provide input to the Program Officer in making a recommendation regarding the proposal.</td>
<td><strong>Award Finalized.</strong> The award includes an award notice, budget, proposal, applicable conditions, and any other documents or requirements incorporated by reference into the agreement. Each award notice identifies conditions that are applicable to, and become part of, that award.</td>
</tr>
<tr>
<td><strong>Proposal Received.</strong> Proposals are received and assigned to the appropriate program area for acknowledgement and, if they meet NSF requirements, for review.</td>
<td><strong>Program Officer Recommendation.</strong> After scientific, technical, and programmatic review, the Program Officer recommends to the cognizant Division Director whether the proposal should be recommended for an award or declined for funding. Large or highly complex proposals may require additional review/processing time.</td>
<td></td>
</tr>
<tr>
<td><strong>Division Director Review.</strong> If the decision is made to decline the award, the organization is notified and review information is available in FastLane. If the decision is to award, the recommendation is submitted to a Grants &amp; Agreements Officer in the Division of Grants and Agreements.</td>
<td><strong>90 Days</strong></td>
<td><strong>6 Months</strong></td>
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Figure 2520.3-2: NIH Grants Process At-A-Glance

**Planning, Writing, Submitting**

**Planning:** Applicant should start early, collect preliminary data, and establish internal deadlines.

**Writing:** Applicant often begins writing application several months prior to application due date.

**Submitting:** Applicant organization submits application to NIH/Division of Receipt and Referral (DRR), Center for Scientific Review (CSR) (using Grants.gov and eRA Commons for electronic submissions).

**Receipt and Referral**

**Months 1-3**

Application arrives at CSR. (Applications compliant with NIH policies are assigned for review and funding consideration.)

CSR assigns application to an NIH Institute/Center (IC) and a Scientific Review Group (SRG).

Scientific Review Officer (SRO) assigns applications to reviewers and readers.

**Peer Review**

**Months 4-8**

**Initial Level of Review:** SRG members review and evaluate applications for scientific merit.

**Priority Scores:** Available to PD/PIs on eRA Commons.

**Summary Statement:** Available to PD/PIs on eRA Commons.

**Second Level of Review:** Advisory council/board reviews applications.

**Award**

**Months 9-10**

**Pre-Award Process:** IC grants management staff conducts final administrative review and negotiates award.*

**Notification of Award:** IC issues and sends Notice of Award (NoA) to applicant institution/organization.

**Congratulations!** Project period officially begins!

*Requests additional information needed just-in-time for award.

**Post-Award Management**

Administrative and fiscal monitoring, reporting, and compliance.

APPLICATION TITLES, abstracts and statements of public health relevance that are part of your application are read by reviewers, program officers and other NIH staff, but once funded, this information is also available to the public via NIH’s RePORTER website (http://report.nih.gov/index.aspx). It is essential that the public is able to learn about the research projects in which our nation is investing. Therefore, the extramural community has a responsibility to clearly communicate the intent and value of their research to all those interested in learning more—Congress, the public, administrators, and scientists. Take every opportunity to tell people what you do, why you do it, and why they should care — clearly!

Knowing that your title, abstract and public health relevance statements will be public if your grant application is funded means that you should consider more than just reviewers when writing them. Clear, succinct language is appreciated by everyone, reviewers included. That being said, writing clearly and succinctly without compromising the science is a challenge. It is easy to lapse into familiar scientific jargon or to “utilize” elaborate words in an effort to make your writing more technical.

On the other hand, it is often difficult to strike the balance between being too scientific and too colloquial because colloquialisms can lead to misinterpretations of the research value. Nonetheless, a great idea told in a way that an educated audience can understand will speak for itself. So I encourage you to use language that best expresses the importance of your research for the portions of your application that will reach the wider community. Reviewers are being notified to expect plain language in these sections of your application. You have the rest of the application to describe the technical details of your project.

**Tips on Communicating the Value of Your Research Clearly**

- Remember that the audience reading the title, abstract and public health relevance statements may not be scientists.
- Avoid scientific jargon or technical writing.
- Communicate the bigger picture. State what you are proposing, why it is important, and explain the potential impact on public health.


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1This article is reprinted from NIH’s Office of Extramural Research’s monthly newsletter, Extramural Nexus, August 2010, http://grants.nih.gov/grants/nexus.htm. Sally Rockey is NIH deputy director of extramural research.
Resources
For more information on this initiative and to see before and after examples of using plain language in a NIH application title, abstract and statement of public health relevance, please see Communicating Research Intent and Value in NIH Applications (http://grants.nih.gov/grants/plain_language.htm). See also the All About Grants Web page for a podcast on the topic (http://grants.nih.gov/podcasts/All_About_Grants/index.htm).

The NIH also offers tips for the use of Plain Language on its Web page, Clear Communication: An NIH Health Literacy Initiative (www.nih.gov/clearcommunication/plainlanguage.htm). If you’re looking for other elements of the grants process and/or additional grant writing tips, check out the About Grants Web page (http://grants.nih.gov/grants/grant_basics.htm) for helpful links, including those on Writing Your Application (http://grants.nih.gov/grants/writing_application.htm).
More Paper Out the Door: Ten Inexpensive Ways to Stimulate Proposal Development

Robert Porter, University of Tennessee

Abstract
Conventional wisdom says that the way to win more awards is to get researchers writing more proposals. Yet many incentives designed to stimulate proposal development can be hard on the bottom line, especially those that pay researchers for their time or to attend grant-writing workshops presented by outside consulting firms. This paper presents ten inexpensive strategies the research office can use to stimulate researchers to write more and better proposals. Most of these techniques require little more than efficient use of existing institutional resources.

Introduction
In classic management theory, some functions are “line,” which means they relate directly to the goods or services produced by the organization, while others are “staff,” meaning they exist primarily or exclusively to support the line functions. In a university, teaching and research are line functions. Research administration, like human resources, has traditionally been a staff function. Our typical role has been to support, facilitate, and enable our institutions’ researchers in their efforts to find money for their scholarly work. Krauser (2003) described our ideal role as that of an institutional servant-leader.

In the overall flow of events, however, much of our work has been downstream, as most pre-award specialists first engage researchers at the point when a grant proposal is nearly ready to be submitted to a sponsor. If the proposal turns out to be successful (and a declining percentage of them are), then our post-award staff swing into action. For research administration to lead in an increasingly competitive environment, a good case can be made that we need to focus more of our energies upstream, where researchers may or may not be thinking of writing a proposal in the first place.

Ten Strategies
Here are ten ways to get more winning proposals coming in the pre-award door. Accompanying the rationale for each strategy, there are practical tips for implementing and managing the endeavor.

1. Home-grown Workshops
Grant writing, like any skill set, can be intimidating to those who lack confidence in their ability to produce a quality product. Because it is intensely competitive with a greater chance of losing than winning, researchers are faced with the prospect of investing their precious time to no avail. Workshops can go a long way to reduce...
or eliminate such disincentives. Recognizing this, many institutions send researchers to grant-writing institutes or bring consultants on campus to provide the training. Either approach can be inordinately expensive with questionable returns, as many such programs are typically targeted to broad audiences such as public school educators and nonprofit organizations, and not to the specialized needs of academic researchers.

Home-grown workshops, taught by any combination of research office personnel and grant-savvy faculty, are more likely to yield positive returns at a much lower cost. Beginning workshops on basic grant-writing skills should be offered on a regular basis, supplemented periodically by those focusing on specific funding agencies. Especially popular are presentations by successful grant writers and copies of winning proposals (Porter, 2004).

2. Visits by Grant Program Officers

Researchers are stimulated by updates from grant program officers (POs) at major federal agencies, many of whom are encouraged to present information at professional meetings and to make campus visits. While they sometimes balk at traveling to a single institution, it is a different matter entirely if you can invite them to a multi-institutional gathering. Contact research administrators at nearby institutions. Raise the prospect of co-sponsoring a grants conference and offer to be the host institution. With just a few positive responses, you can present POs with the prospect of presenting to a regional grants conference.

Your success rate will be higher if you address your first inquiry to high-ranking administrators at the agency. They typically pass along your invitation to designees who now have a stronger incentive to accept, and these are the people you wanted anyway. You will get much more out of their visit if you plan for double-duty: Start with morning presentations to the assembled group, then arrange afternoon meetings with individual researchers. To be scheduled for a private meeting, investigators must first send you concise abstracts of their proposed research, which are then forwarded to the POs prior to their arrival. Even when the proposed project falls outside the POs’ program

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expertise, it is surprising how often they can offer constructive advice. And here is the good news for your budget: By federal rule, they cannot accept honoraria and the government must pay their travel expenses. (An exception is a working lunch, for which high-ranking administrators at your institution might be willing to pay.)

3. Awards Newsletters

Despite the ever-increasing emphasis on interdisciplinary research, many investigators operate within self-imposed silos of their own departments and laboratories (Rhoten, 2004). Frequent communications about your institution’s overall funding activity can do a great deal to force cracks in these walls. Try sending a periodic hard-copy newsletter to all faculty and administrators listing recent awards by principal investigator, sponsor agency and total amount. Readers will quickly see that most large awards are interdisciplinary.

Group the listings by department and/or college. Once a quarter, compile the awards data into bar graphs showing key trends, e.g., number of proposals submitted, total awards, comparisons with last year, etc. Each year, publish the “top ten” awards (or whatever number best reflects your institutional size). The impact of this simple tool can be surprising, and the benefits are many: (a) writers of winning proposals are recognized and celebrated, regardless of the size of their awards; (b) investigators learn about successful principal investigators (PIs) who might become future collaborators; (c) investigators learn about funding sources they were not aware of before; (d) administrators can see how their departments and colleges compare with others, and how they are trending; (e) the whole institution gains a heightened sense of its current research portfolio; and finally, (f) the research office is credited with compiling and disseminating the data.

The University of Tennessee has posted a variety of newsletter formats on its research office web site (http://research.utk.edu). A word of caution: You can expect researchers and administrators (especially those with low numbers) to scrutinize this list and raise questions about how the data are compiled and reported. This is not necessarily a bad thing, as long as you can justify your procedures and apply them consistently. And be forewarned: Any change in your data-reporting method data will only result in a new list of detractors!

4. Collections of Successful Proposals

Reading successful grant proposals has a powerful influence on beginning writers (Friedland & Folt, 2009; Henson, 2004; Porter, 2004). Not only do they pick up valuable lessons on writing style; they also learn about possible new funding sources and how to mold their proposal to fit a particular grant program. Finally, they identify colleagues who can be a font of useful information about how to interact with sponsors and with specific program officers.

Most grant winners like to share their successes, and reading their winning proposals can be an effective way for a newcomer to start a mentoring relationship. To post a sample collection online, start by forming a committee of experienced senior researchers representing a range of disciplines. Distribute a list of recent awards
to your institution and ask the committee to select a diverse sampling of research themes and funding agencies. As a professional courtesy, request permission from the selected PIs to post their proposals on a secure web site, accessible only to researchers in your institution. A few PIs may perceive this as encouraging future competition, but most will be glad to accommodate. Be sure to promote the availability of the collection and keep it updated.

The research office web site at the University of Tennessee features a Grantseekers Tool Kit, a collection of helpful materials that includes successful proposals from a variety of sources (http://research.utk.edu/pd/toolkit.shtml).

What if your store of institutional proposals is limited? Copies of winning proposals in many disciplines can be purchased from The Grant Center at reasonable rates (www.tgcigrantproposals.com). The National Institute of Allergy and Infectious Diseases has posted four recent R01 proposals with reviewers’ comments using the new NIH per review scoring system (www.niaid.nih.gov/researchfunding/grant/pages/appsamples.aspx). Finally, successful proposals can be obtained directly from federal agencies under the Freedom of Information Act with a simple request, but be prepared to wait four to six weeks for the documents to arrive, with sensitive information redacted, such as investigator salaries and intellectual property.

5. Departmental Retreats

Department heads at research institutions are always eager to expand their portfolios of sponsored projects, and annual retreats provide excellent opportunities for grants specialists to provide useful information, including updates on funding opportunities, data on proposal award activity, and a review of the support services offered by the research office. To get on the agenda, let department heads know about recent grants conferences you have attended, such as those sponsored by NSF and NIH, and offer to present relevant updates at their retreats.

Even if you have not attended a recent conference, these agencies often post slides of key conference presentations on their web sites; you can pick and choose which ones would be of most interest to any given audience. Before the retreat, search funding databases such COS, InfoEd SPIN, and the Foundation Directory Online for grants targeted to the discipline at hand. Select a dozen or synopses of programs that appear most promising and distribute copies at the retreat. You will be surprised to see how many faculty are unaware of programs from major agencies that are repeated on an annual basis.

6. Mentor Matchmaking

Young investigators can find themselves in a lonely “sink or swim” environment when it comes to sponsored research, and many are hesitant to approach experienced grant writers on their own. Unfortunately, institutions that provide structured mentoring systems are more the exception than the rule—an odd irony, since senior researchers, especially those in academic settings, are usually willing to share their wisdom if the circumstances are right. So what are the “right circumstances” for low cost mentoring? First and foremost, recognize that busy senior researchers are
jealous guardians of their time. To be effective as a matchmaker, the grants specialist must be both coach and cheerleader.

Start by working with the new investigator to clarify promising research ideas and possible funding sources. The next step is to identify which senior researcher(s) could be a helpful resource. Then contact the senior person and ask for a brief meeting. Escort the junior person to the session to facilitate the dialogue and keep the meeting focused on key questions: Does the research idea appear to be fundable? Which specific grant program in the sponsor agency should be targeted? Does the senior person have personal contacts in that office? Does s/he have any suggestions for developing a strong research design? Would s/he be willing to look at a one- or two-page project overview? After the session, prod the junior person to send immediately a well-written thank-you, with the brief project summary attached. (Be aware that inertia in professional relationships settles in quickly, so success in the matchmaking role often entails some degree of nagging.)

7. Research Forums

An institution’s research portfolio cannot grow substantially if most proposals going out the door are the small, single investigator type. Major multidisciplinary proposals start with researchers sparking ideas off one another, and this cannot happen if investigators remain siloed in their labs. Moreover, whole departments can be locked into a traditional, discipline-driven view of their research potential, too narrow to be competitive in today’s theme-driven, interdisciplinary funding environment. The research office can provide a valuable service by serving as a kind of “executive producer” of research forums focused on promising interdisciplinary issues, such as green engineering, climate change, and the economic potential of social networking.

Of special interest are themes highlighted in the strategic plans of major funding agencies such as the National Science Foundation (2011), the National Institutes of Health (2011), and the U.S. Department of Energy (2011). Coordinating a research forum is time-consuming but not particularly costly, even if no registration fee is charged. Little academic expertise is needed on your part as the more experienced researchers are very good at identifying appropriate speakers and persuading them to come. Once the agenda is set, a little promotion to nearby institutions will usually result in good attendance, as everyone is looking for sponsor updates and future collaborators. The effort does require a strong capacity to plan ahead, a keen eye for detail, excellent communication skills, and the ability to follow through on all assignments—precisely the skills of many folks in the research office.

8. Online Tutorials

There is a wealth of fine grant-writing tutorials online, but few new investigators know where they are. The best grant writing tips for NIH proposals can be found on the web site of the National Institution of Allergenic and Infectious Diseases (www.niaid.nih.gov). (These materials are also useful for USDA proposals.) The Foundation Center offers an excellent short course on writing proposals to private foundations (http://foundationcenter.org/getstarted/tutorials/shortcourse/index.html).
A quick Internet search will locate helpful guides to other government and private agencies. Hot links to several concise, highly readable materials should be featured on the research office’s web page and promoted via the awards newsletter and other channels of communication. The Grantseekers Tool Kit page at the University of Tennessee features numerous guides, articles and manuals—some of general interest, others focused on specific funding agencies (http://research.utk.edu/pd/toolkit-resources.shtml).

9. Helping Researchers Get on Review Panels

Serving on a review panel is like a graduate education in grant writing: This is where researchers learn to step out of their academic boxes and write to the needs and expectations of the folks who have a great deal to say about where the money goes (Porter, 2005). Because the major agencies need thousands of new reviewers each year, grant program officers are constantly on the lookout for fresh talent.

When young investigators have honed their core research theme into a brief two or three paragraph project summary, they are well advised to send that all-important first e-mail to the appropriate PO, inquiring whether the basic idea is a good fit with the program (Porter, 2009). If the response is encouraging, the next e-mail should express a desire to serve on a review panel, and include a brief résumé with picture attached. It is not uncommon for young investigators to be invited to serve, either on a panel or as a mail reviewer, even before they have submitted their first proposal.

Though trips to visit with POs can be expensive for researchers in some locations, those within driving distance should do this on a regular basis. Experienced grant writers view these pre-proposal discussions as critical to their success. Newcomers to the sponsored research game are unnecessarily hesitant about this, as they are uncertain how they will be received. In fact, most POs are highly receptive to such meetings, for practical reasons:

(1) Listening to new ideas for research can be an effective way for a deskbound program officer to learn about possible new directions in the field.

(2) If the research idea is not a good fit, these conversations can reduce the number of noncompetitive proposals that must be processed.

(3) If it is a good fit, the PO can offer helpful tips to shape the proposal for success.

(4) Such meetings are a good way to recruit new talent for future review panels.

If travel to the DC area is not practical, new investigators should be encouraged to look for grant program officers at meetings of their academic disciplines, as POs are encouraged to attend such events.

10. Coaching and Editing

Many, if not most, young researchers struggle with grant writing. Even those with impressive publishing records can find it frustrating to shift from dense academic prose to a concise, energetic proposal writing style. This is where the grants specialist as a coach and editor can provide help that could make the difference between
failure and success. Good grant writing is mostly a matter of rewriting, and if the core idea is fundable, it is well worth the time invested to turn weak writing into a persuasive presentation. Though coaching and editing are labor-intensive at first, the need for assistance tails off rapidly once the researcher catches on to the simpler, more free-flowing style of a winning proposal.

“By extending a helping hand at the most critical phase of researchers’ thinking—whether or not to write a proposal—a proactive research office exerts a powerful upstream influence on the overall flow of the institution’s research activity.”

Literature Cited


About the Author

Robert Porter, Ph. D., is Director of Research Development, University of Tennessee, where he conducts grant-writing workshops for faculty and graduate students. Over the past ten years he has presented papers and workshops on grant writing at national conferences and has published prize-winning articles in the *Journal of Research Administration* and *Research Management Review*. Dr. Porter has previously taught at Virginia Tech, Swarthmore College, and Eastern Washington University. He holds graduate degrees in Speech Communications from the University of Michigan.
 Proper Acknowledgement of Awards
Evelyn Goldfield, National Science Foundation

It is very important that all publications that result from the National Science Foundation (NSF) funding properly acknowledge the NSF award by grant number. Proper acknowledgement helps us assess the impact of a given award, better manage our awards and understand our portfolio.

Proper acknowledgement is particularly necessary for principal investigators (PIs) who have multiple lines of funding either from NSF or other federal agencies. For those with multiple awards, please note the following:

1. In your annual and final reports, include only those publications that explicitly acknowledge the given award.

2. In the “Results of Prior NSF Support” section of your renewal proposals, list only those publications that result from the particular referenced award. If there is a valid reason to list other publications, please detail this reason and the actual source of funding.

3. When acknowledging multiple awards in publications, include only those that contributed to the research being reported. Specify the actual contribution of each award to the work; where possible. Please do not use a blanket acknowledgment listing all your grants on each of your publications.

4. If you have more than one line of funding:
   - Indicate the relationship between your proposed research and your funded research, addressing synergy, overlap etc. either in the project description or on the current and pending support form.
   - If you are part of a large collaborative or center, indicate the approximate annual amount that you actually receive. It is also helpful for us to know your intellectual contribution to the collaborative activity or the center.

Awardees are encouraged to reference their specific Award Conditions for further guidance.
Strategies for Promoting Researcher Compliance with Internal Grant Deadlines

Kristine M. Kulage, Columbia University School of Nursing

Although grant applications come in many shapes and sizes and are submitted to a wide array of agencies, a universal reality for all parties involved is the dreaded deadline. Therefore, it’s not surprising that one of the most common challenges administrators face during the grant preparation process is ensuring compliance with deadlines. Researchers know that there is usually no flexibility with an agency’s set deadline for receipt of applications. This is particularly true in the biomedical research field as federal agencies like the National Institutes of Health (NIH) and the National Science Foundation have receipt deadlines that are hardly negotiable.

On the other hand, internal deadlines established by departmental and central grants administration offices are typically viewed as soft deadlines that are “up for debate.” Because research administrators understand the critical role these internal deadlines play in assuring successful, timely grant submissions, enforcing them is a constant source of conflict between faculty and staff. This article offers an overview of the strategies for promoting researcher compliance with internal grant deadlines that we have implemented in the Office of Research Resources (ORR) at Columbia University School of Nursing’s administrative office that works directly with the medical center’s central sponsored projects office on grant submissions. While we have experienced varying levels of success depending on the situation and researcher, overall these tactics have helped ease some of the inevitable tension surrounding internal grant deadlines.

Support from Up Above

At the school or departmental level, I have found unwavering support from higher authorities to be the most effective strategy in promoting researcher compliance with internal deadlines set by a central sponsored projects office. The ORR’s greatest ally in the battle to meet deadlines is our school’s Associate Dean for Research, who also happens to be my direct supervisor. Since joining the School of Nursing seven years ago as Director of the ORR, we have implemented successful initiatives to promote compliance with deadlines. This proactive approach, which helps avoid the problem of last minute submissions all together, is fully supported by our Associate Dean for Research. Her support goes beyond just enforcing a rule; because she truly believes in it, she helps “market” the message by vocally promoting it at faculty meetings and ORR researcher seminars. This has helped create a culture of compliance in our school and an atmosphere of little tolerance for subverting these deadlines.

1 This article is reprinted from the NCUIRA Magazine, Vol. XLII, No. 7, December 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
In an ideal world, every departmental research administration office would have a faculty member in a high level administrative position to back them up in support of enforcing internal grant deadlines. I encourage research administrators to engage in discussions with superiors, Assistant/Associate Deans, and even the Dean or Chairperson regarding the need for compliance with internal grant deadlines and how they might partner with you to not only establish guidelines and policies, but also enforce them. Be prepared to face resistance, as it will take convincing arguments, even from higher authorities, to facilitate change. But let’s face it – we all know that faculty members are more likely to comply with mandates that come from “up above.”

Presentation Is Key
When a new research faculty member joins our school, they attend a mandatory orientation to the ORR. Within the context of presenting the myriad of services we offer to assist researchers in submitting applications and administering funded grants, we gently but firmly review our deadline policies. We not only inform them that our medical center’s sponsored projects administration office (SPA) has established a mandatory internal grant deadline of 5 business days prior to agency due date, but we also explain why our school chooses to vehemently adhere to this deadline. We emphasize that our office works in tandem with SPA as well as researchers as one unified team with a common goal: the timely submission of flawless grant applications. I have found Principal Investigators (PIs) to be much more receptive to deadline policies when they are given an explanation of the legitimate rationale behind them.

What’s in It for Me?
Following this line of thought, rather than presenting the internal deadline to PIs as something SPA has cruelly imposed upon already time-constrained researchers in some secret effort to inhibit their scientific endeavors, we highlight the significant advantages of compliance. Applications submitted on or before internal deadlines are unquestionably given earlier and more meticulous administrative reviews. When a sponsored projects officer is not pressed for time, their reviews can be more thoughtful and thorough rather than just skimming through the application verifying the most basic mandatory information. For example, time is available to give careful consideration to compliance requirements (e.g., conflict of interest, training in research involving human subjects) in order to ensure a smooth, error-free review of the application by the agency’s scientific review panel. This additional set of eyes beyond the departmental grants administration office can only improve the quality of the final application and increase its odds for eventual funding. In addition, if our school’s recognized gold standard is to meet or exceed all deadlines, our good reputation can be used to more easily buy researchers exceptions to the deadlines when unfortunate situations arise that unintentionally cause an application to be late.

Benefits to researchers who comply with internal deadlines go beyond those provided by a sponsored projects office. As a grants manager in a medical center, the majority of our applications are submitted to the NIH through grants.gov and
Supplementary Material

land in the Electronic Research Administration (eRA) Commons. The earlier a grant is submitted to SPA, the sooner it is reviewed and submitted electronically to grants.gov and the eRA Commons. This then allows for a larger window of time in which necessary revisions can be made and fatal errors can be corrected. In addition, the NIH announced via NOT-OD-10-123 that effective January 25, 2011, it will eliminate its error correction window that extends two business days past the due date (e.g., if the application was submitted on the deadline date of June 5, it could still be rejected, corrected, and resubmitted up to June 7; this will no longer be the case). The good news is that PIs can still take advantage of the two-business-day window prior to the submission deadline (e.g., if the application is submitted on June 3 for the June 5 deadline, it can be rejected, corrected, and resubmitted up until June 5).

“NIH, AHRQ, and NIOSH encourage applicants to submit in advance of the due date to take advantage of the opportunity to correct errors and warnings and to review the application in eRA Commons before the deadline” (see http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-123.html). This upcoming change makes compliance with internal deadlines even more important.

When logical arguments such as these fail to sway researchers, grants administrators can always play the fear factor card. We all have examples to share which illustrate worst-case scenarios that have come true despite our best efforts: the finalized Adobe grant file that suddenly became corrupt; the computer that crashed at the 11th hour; the Internet server that failed to transmit; the Fedex delivery truck that missed the last pick-up of the day.

Help Facilitate Compliance

In addition to constant communication with faculty members and promotion of policies, there are ways in which grants administrators can take an active role in helping facilitate researcher compliance with internal grant deadlines. Our office maintains a schedule of both confirmed and potential future grant submissions, and we frequently initiate dialogue with our PIs by sending gentle reminders to nudge them along in their grant preparation and writing. As internal deadlines approach, we let them know we are ready to assist; we inquire about their progress in confirming their research team; we suggest dates and times for budget meetings; and occasionally we simply check in with our researchers via e-mail to encourage their continued work on the application.

Efforts such as these prevent applications from falling through the cracks. By not sitting idly by and waiting for faculty members to approach us with their needs at various phases of the process, we exert what little control we can over compliance with timelines and deadlines. Again, our facilitation of progress in grant preparation is presented as teamwork toward the common goal of an on-time, fundable grant submission.

No matter how much your school or department strives for compliance with internal grant deadlines, there will always be faculty members who feel they are the exception to the rule or who insist, “Department X isn’t compliant, so why do we have to be?” Implementing some strategies for promoting researcher compliance
with internal grant deadlines can minimize the conflict between administrators and faculty members and help make situations of noncompliance the exception rather than the norm.

About the Author
Kristine M. Kulage is Director, Office of Research Resources, Columbia University School of Nursing and Biomed Corner Contributing Editor.
Which NSF Program Presents the Best Fit for My Research at the Chemistry/Biology Interface?¹

David Berkowitz, Program Director, Chemistry of Life Processes

The Chemistry of Life Processes Program within the Chemistry Division is focused on molecular level inquiries at the Chemistry/Biology interface in which the primary approach or tools employed are those of chemistry. Projects that integrate experimental and theoretical chemical approaches into studies of biomolecular processes in the domain of proteins, nucleic acids, carbohydrates and lipids will be considered. The use of small molecules such as ligands, inhibitors, signal transducers or molecular beacons to interrogate biological systems is a characteristic mode of inquiry for CLP investigators. Studies directed at elucidating cofactor, (metallo)enzyme, ribozyme or riboswitch mechanism/design or characterizing molecular recognition as they relate to macromolecular assembly or macromolecule effector complexation are at the core of the program. Other appropriate areas of inquiry include, but are not limited to, peptide design, alternative base pairs, and molecular definition of emerging “codes” such as those associated with glycomics and histones.

Certain topics at the Chemistry/Biology interface have elements of interest to both the CHE CLP program and clusters within the Division of Molecular & Cellular Biosciences (MCB) (vide infra). In such cases, when considering submission to CLP, please note that to be appropriate for CLP the proposal should, at its nexus, seek to reveal underlying chemical principles. Such topical areas include protein folding, post translational modification and DNA damage and modification.

Also included here are areas of molecular recognition at macromolecular interfaces, such as protein protein and protein nucleic acid interactions. With regard to this latter area, the CLP program is especially interested in proposals that seek to elucidate design principles of molecular recognition, through the modulation of such interactions. Of equal interest is the de novo construction of systems that mimic native protein protein/nucleic acid interactions, based upon the design principles garnered from the study of the native system.

Please note that while projects whose long term scientific broader impacts may have biomedical implications may be acceptable for submission to CLP, those with direct biomedical aims are more appropriate for the National Institutes of Health or other health directed funding agencies, and will be returned without review from the NSF. As always, contact the cognizant program officer(s) at the Foundation if/when in doubt about which program represents the best fit for your science.

In considering submitting a proposal at the Chemistry/Biology interface to the NSF, PIs should be aware that there are several programs at the Foundation at the boundary between the MPS (Mathematical and Physical Sciences) Directorate and the BIO Directorate that should be considered. This piece is meant to both articulate the interests of the Chemistry of Life Processes (CLP) Program within CHE (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503417) and act as a guide to the

¹Reprinted from Newsletter of the NSF Division of Chemistry, August 2011, Issue 17.
PI, so that s/he has the overview at the front end of the proposal preparation process, and targets the most appropriate program.

(1) If the project is focused upon fundamental physical principles that underlie biological function, and seeks to interrogate living systems, then submission to the Physics of Living Systems Program (PoLS) within the MPS Physics Division may be in order (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6673).

(2) If the proposal at its core is investigating biological materials, be they materials of biological origin, or those that mimic or are inspired by biological materials, then it may be most appropriate for the Biomaterials Program (BMAT) within the MPS Division of Materials Research (DMR) (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13699).

(3) If the proposal is primarily focused on answering a fundamental question in biology, then the PI should consider submitting to the MCB Division of the BIO Directorate. MCB divides itself into Clusters as follows:

(a) Biomolecular Dynamics Structure and Function Cluster (BDSF) – (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503609&org=NSF) e.g. molecular biochemistry/biophysics; global protein protein interactions, synergy and allosteric, biomolecular structure and dynamics, particularly as studied by X ray, NMR and EPR techniques; (b) Cellular Processes (CP) – (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503612&org=MCB&from=home) e.g. membrane protein function, organelle trafficking, cytoskeletal dynamics;

(c) Genetic Mechanisms (GM) (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503610&org=MCB) – e.g., DNA replication and repair, gene expression, chromosome dynamics, epigenetics; and

(d) Networks and Regulation (NR) (http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503611&org=MCB&from=home) – e.g. signaling and metabolic networks, artificial/minimal cells, microbial communities, synthetic biology.

Please note that while projects whose long term scientific broader impacts may have biomedical implications may be acceptable for submission to CLP, those with direct biomedical aims are more appropriate for the National Institutes of Health or other health directed funding agencies and will be returned without review from the NSF.

As always, contact the cognizant program officer(s) at the Foundation if/when in doubt about which program represents the best fit for your science.
Strategies for Successful NIH Training Grant Applications

Jaime S. Rubin, Columbia University Medical Center

Institutional training grants funded by the National Institutes of Health (NIH) are critically important components of a research institution’s portfolio of sponsored projects. While usually providing limited funding for direct expenses and even less for facilities & administrative (F&A) costs, this unique funding mechanism can have a very significant impact on both the teaching and biomedical research missions of an academic institution.

Training Grant Basics

Institutional training grants, also known as National Research Service Awards (NRSAs), are very large, complex applications, sometimes hundreds of pages long. The effort required to submit one cannot be overstated; this is not the job for one investigator and one administrator deciding to apply a few months before the deadline. A team of administrators working together is required, and the process cannot begin too early. Awards may be renewed many times after the initial 5-year funding period, and the NIH RePORT Tool (http://report.nih.gov) shows some training grants have had over 30 consecutive years of funding.

The two most common types of NIH institutional training grants are the T32 and the T35. While the T35 mechanism typically supports medical or veterinarian students for 2-3 months of short-term research training, the T32 provides a full year of research training, supporting pre-doctoral or post-doctoral trainees, or both. Funding is provided for a defined number of “slots,” e.g., 5 pre-doctoral slots and 4 post-doctoral slots. Areas of support include stipend, health insurance, tuition, and travel. Calculating the budget for these applications is not complicated. The NIH annually publishes the stipend level for pre- and post-doctoral trainees and the allowable health insurance (http://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-067.html). Tuition support is formula-driven, and for those in degree granting programs it is generally 60% of the tuition costs, up to a maximum of $16,000 per trainee each year. Funds allowed for travel vary by institute, and the F&A rate is 8% of direct costs, not including tuition.

Strategies for Focusing Training Programs

Institutional NRSAs provide funding for clearly described and unique research training programs. Submissions that are simply looking for a way to provide stipends for pre- or post-doctoral fellows working in a laboratory will not be funded. Additionally, applications that do not present a distinct training program created around related and specific state-of-the-art research themes, as well as those which do not describe program-specific activities for the trainees, will most likely not be funded.

1 This article is reprinted from the NCURA Magazine, Volume XLIV, No. 1, January/February 2012, published by the National Council of University Research Administrators. It is used with permission of the publisher.
It is critical that an institutional training program present an integrated research theme, a graphic example on how to represent this is shown in Figure 2520.9-1. On the left, areas of faculty research interest are represented as thematic, multidisciplinary/interdisciplinary, and collaborative. The converse, shown on the right, can give the reviewers an impression of a research program that is poorly integrated.

Another important strategy is for the program to address a training void at the institution (e.g., support for these trainees is not otherwise available) and possess its own unique identity. At the same time, the training program should also be well integrated into the research and academic infrastructure of the institution such as partnering with a Clinical and Translational Science Award, Cancer Center, master’s degree programs, or interdisciplinary research centers. Letters of support from the Directors of these programs should be included in the application as well as from the Deans of any participating schools and other institutional officials addressing their strong support and commitment of personnel and resources.

**Training Program Organizational Structure**

The proposed training program should have a defined organizational structure for recruiting, selecting, and admitting pre- and post-doctoral trainees, reviewing the trainees’ progress, and assisting in their career development. Figure 2520.9-2 provides a sample structure for a training program which is overseen by both a Program Director and an Associate Program Director who are also faculty members, leaders, administrators, and research mentors with complementing expertise. The External Advisory Committee is comprised of senior investigators whose research interests overlap with those of the program and have experience as training program directors and mentors. The Internal Advisory Committee is comprised of senior faculty members (e.g., department chairs, institute and center directors) who can help ensure institutional support and success of the program.
Senior faculty mentors lend their expertise to the three programmatic committees: (1) the Recruitment and Admissions Committee which selects pre- and/or post-doctoral trainees for support by the training grant; (2) the Research and Mentorship Committee which assists trainees in selecting appropriate mentors and then oversees their progress to ensure that research milestones are being met; and (3) the Career Development Committee which assists the trainees as they transition to the next stage of their academic research careers. Example activities for these committees are shown in Figure 2520.9-3.

**Figure 2520.8-3: Roles of Training Program Committees**

<table>
<thead>
<tr>
<th>Committee</th>
<th>Roles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recruitment and Admissions Committee</td>
<td>• Formal application review and selection process</td>
</tr>
<tr>
<td></td>
<td>• Diversity and recruitment of underrepresented minorities</td>
</tr>
<tr>
<td>Research and Mentorship Committee</td>
<td>• Trainees selection of mentors</td>
</tr>
<tr>
<td></td>
<td>• Didactic program, e.g., formal courses</td>
</tr>
<tr>
<td></td>
<td>• Monitoring of trainees academic and research progress</td>
</tr>
<tr>
<td></td>
<td>• Yearly retreat</td>
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<td></td>
<td>• Seminars and Journal Clubs</td>
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<tr>
<td></td>
<td>• Research presentations by trainees</td>
</tr>
<tr>
<td></td>
<td>• Measurement/evaluation of training program, e.g., outcomes, questionnaires for mentors and mentees</td>
</tr>
<tr>
<td>Career Development Committee</td>
<td>• Training on the Responsible Conduct of Research</td>
</tr>
<tr>
<td></td>
<td>• Instruction on obtaining funding and grantsmanship</td>
</tr>
</tbody>
</table>

**Mentors and Trainees: Quantity and Quality**

In addition to the proposed training program and research themes, the selection of mentors and mentees (or trainees) is critical for successful applications. The information provided in the main body of the text, as well as in the required data tables, should demonstrate to the reviewers in both quality and quantity that faculty members selected to serve as mentors are both excellent scientists and mentors. Quality is demonstrated by providing detailed funding information demonstrating that the
mentors have sufficient NIH and other peer-reviewed extramural funding to support the research efforts of their trainees (as requested in application Data Table 4). A faculty member without extramural support or with only industry support (e.g., clinical trials) in many cases would not be viewed as an appropriate mentor in an academic setting.

There are exceptions to these examples. A promising junior investigator with limited extramural support but with a good start-up package who is conducting exciting research would make an excellent mentor. This assistant professor could be partnered with a more established NIH-funded investigator and offer the trainee a unique co-mentorship arrangement by “pairing” junior and senior faculty. This provides the trainee opportunities for collaboration with the junior investigator as well as the larger research base, expansive knowledge, and international contacts of the senior investigator. Similarly, a clinical investigator who is a world renowned leader in their field and publishes in top-tier journals but lacks NIH funding can be “paired” with an established basic science investigator with solid NIH funding. This co-mentoring arrangement can provide pre- and post-doctoral trainees with a multidisciplinary approach to their research training experience.

Information is also requested on each mentor’s current and previous trainees (as requested in application Data Tables 5A and 5B). Similarly, a mentor whose previous trainees have left academia for private practice, industry, or other non-research positions would not appear to have the skill set necessary to help launch junior investigators into successful academic research careers.

The publication track record of trainees that resulted from their research experiences in the mentor’s research group is another important part of the application (as requested in application Data Tables 6A and 6B). A faculty member with a poor publication history with his or her trainees would not be considered an appropriate choice as a mentor. Reviewers will also examine whether a faculty member’s publications are appropriate for the research themes of the proposed training program as provided on their biographical sketch. For example, a well-funded faculty member may have a strong publication record in top journals in the field of epidemiology; however, if the theme of the application is cancer research, reviewers might have serious doubts as to whether a trainee working in this research group would be investigating a cancer-related problem. Another “use” of a mentor’s publication track record is to examine the history of collaboration among the mentors in a specific research theme. Applicants could stress the collaborative nature of the research program by including a list of joint publications by mentors in the appendix to demonstrate how closely the faculty members work together. This is especially important because training grants are expected to be institutional awards, and mentors should represent departments, institutes, and centers (if not schools) across the institution.

The research interests of each mentor should address at least one of the research themes of the training program. In terms of quantity, each research theme or area requires a “critical mass” of mentors. One or two faculty members do not make a research theme. There should also be adequate gender and age distribution. An application with very few women mentors would probably not be reviewed favor-
ably and an application with few junior faculty members representing the future of the training faculty might also be problematic. The total number of mentors as compared to the number of requested trainee slots is also important. Reviewers look for trainees distributed across many research groups and not “bunched up” in a few select laboratories. Thus, a request of funding for 8 post-doc slots with only 16 possible mentors does not offer trainees a wide choice of mentors.

With regard to potential trainees who represent the applicant pool (as requested in application Data Tables 7A, 7B, 8A, 8B, and 10); again it is important to demonstrate quantity as well as quality. The applicant pool is the number of previous training grant eligible (e.g., US citizen or permanent resident) applicants to the training program. For example, how many students have applied to the relevant Ph.D. programs? How many clinical fellowship applicants have been interested in a two-year research program? How many first year medical students have been interested in summer research experiences? In addition to quantity, quality is important. This is demonstrated by the success of any past research experiences as well as academic records. Has the post-doctoral applicant pool had previous research experiences? What are the GRE or MCAT scores of the pre-doctoral applicants? It is important that this information, which is provided in the often lengthy data tables at the end of the application, be clear, complete, and accurate. Will reviewers read these tables line by line, word for word? Probably not. But reviewers have been known to point out inconsistencies and incompleteness in the tables as a weakness in the overall application.

An institutional NIH training grant application is very large and complex, with a number of separate, but interlocking critical components. Each section must be comprehensively addressed for a competitive application. While very difficult to prepare, successive efforts provide funding and infrastructure, thus allowing research-intensive academic institutions to satisfy their mission to train the next generation of biomedical scientists.

About the Author

Dr. Jaime S. Rubin (jsr9@columbia.edu) is currently the Director for Research Development in the Department of Medicine at the Columbia University Medical Center. She has previously held a number of the senior leadership positions, including Acting Associate Vice President for Research Administration and Acting Associate Dean for Graduate Affairs at Columbia. She regularly lectures and consults on funding, grantsmanship, the career development of junior investigators, and the responsible conduct of research.
¶2520.10  **NIH Requirement to Use the Research Performance Progress Report**  
National Institutes of Health

Grantee institutions are reminded that they are required to use the eRA Research Performance Progress Report (RPPR) Commons Module for submitting Streamlined Noncompeting Award Process (SNAP) and Fellowship progress reports for awards with start dates on or after July 1, 2013 (i.e., due dates on or after May 15, 2013, for SNAP awards and May 1, 2013, for Fellowships). See the NIH Guide Notice NOT-OD-13-035 for more information about the use of the RPPR for these awards. Noncompliance with these reporting requirements will jeopardize the NIH’s ability to issue timely awards to the institution.

   Progress reports submitted in another format for SNAP and Fellowships will not be processed by the NIH and will require resubmission in the RPPR format. If a progress report for a Fellowship has been submitted on paper, the grantee must resubmit the progress report using the RPPR format. If a progress report for a SNAP grant has been initiated as an eSNAP, the grantee must contact the eRA Help Desk (1-866-504-9552 or commons@od.nih.gov) to change the progress report format to the RPPR. It may take eRA up to two business days to reset the progress report so the user can initiate a progress report in the appropriate format.

**Compliance Reminder**

Failure to submit timely RPPR progress reports for SNAP and fellowship awards subject to this requirement may adversely affect future funding to the organization and/or awards to the same Project Director/Principal Investigator. Accordingly, NIH may impose sanctions on institutions that fail to follow these reporting requirements. Such sanctions may include, but are not limited to, corrective actions, removal of authorities, and/or delay or withholding of future awards to the project or program.

**Inquiries**

For general questions about using the eRA Commons:

   eRA Commons Help Desk
   Web: http://era.nih.gov/help/ (Preferred method of contact)
   Toll-free: 1-866-504-9552
   Phone: 301-402-7469
   TTY: 301-451-5939
   Hours: Mon.-Fri., 7a.m. to 8 p.m. Eastern Standard Time
   Email: commons@od.nih.gov (for Commons Support)

For inquiries about this Notice:

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¶2520.11  NIH Updated Grant Application Forms
National Institutes of Health

Notice Number: NOT-OD-13-074
Release Date: May 30, 2013
Related Announcements: NOT-OD-12-161, NOT-OD-13-075
Issued by National Institutes of Health (NIH)

Purpose
The purpose of this Guide Notice is to alert applicants that NIH is transitioning to updated electronic application forms packages. The new packages will be identified with a Competition ID of FORMS-C and will include the form changes documented at: http://grants.nih.gov/grants/ElectronicReceipt/files/FORMS-C_Changes.pdf.

For due dates on or after September 25, 2013, all applicants will be required to use FORMS-C packages, with the exceptions noted below. The requirement includes electronic applications submitted under the continuous submission policy, administrative supplement requests (Type 3), change of organization requests (Type 6) and change of grantee/training institution requests (Type 7) submitted September 25, 2013 and beyond. Multi-project applications that are transitioning to electronic submission beginning with the September 25, 2013 due dates (see NOT-OD-13-075) will also use FORMS-C packages.

Exceptions
The programs noted below will move to FORMS-C application packages as follows:
◆ Individual Research Career Development Award Programs (Ks), Institutional Training and Career Development Programs (Ts and Ds) and Individual National Research Service Awards (Fs) applicants will be required to use FORMS-C packages for due dates on or after January 25, 2014.
◆ Small Business programs (SBIR/STTR) applicants will transition to FORMS-C packages later in 2014, when we can combine these form changes with anticipated form changes relating to the Small Business Authorization Act.

Background
NIH periodically implements updated versions of federal-wide SF424 (R&R) and agency-specific (PHS) grant application forms in order to remain current with the most recent form sets available through Grants.gov and approved by the Office of Management and Budget.

Beginning this July, the updated forms will be incorporated into new and existing Funding Opportunity Announcements (FOAs). FOAs published between now and July that have submission due dates on or after September 25, 2013, will be posted without application packages. NIH will make every effort to post the FORMS-C ap-

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plication packages with the FOA at least 60 days in advance of the due date.

**Instructions**

◆ If presented with more than one forms package, applicants should download and use the most recent set of forms to complete their submission. However, applicants submitting to AIDS deadlines should be especially careful in choosing the correct package and be sure to follow guide notice timelines.

◆ Return to FOAs posted without a forms package or existing FOAs with ADOBE-FORMS-B1 or B2 packages 45-60 days prior to the deadline to obtain the FORMS-C package.

◆ Verify you have the correct application package by checking the Competition ID for FORMS-C. The Competition ID field can be found when downloading the application package from Grants.gov, in the application header information of the downloaded package or in the ASSIST FOA summary information for multi-project applications.

◆ Learn more about choosing the correct forms packages at: http://grants.nih.gov/grants/ElectronicReceipt/files/right_forms.pdf.

◆ All applicants should carefully read their FOA and the appropriate “C Series” Application Guide for program-specific instructions before completing their application.

**Inquiries**

Please direct all inquiries to:

Grants Information
Office of Extramural Research
National Institutes of Health
Telephone: 301-435-0714
Email: GrantsInfo@nih.gov
Web: http://grants.nih.gov/grants/oer.htm
**Updating Grants.gov Forms: FORMS-C**

NIH’s electronic Research Administration (eRA) periodically implements updated versions of the federal-wide SF424 (R&R) and agency-specific PHS electronic grant application forms in order to remain current with the most recent form sets available through Grants.gov and approved by the Office of Management and Budget.

NIH and other agencies serviced by eRA use the ‘Competition ID’ field of Grants.gov application packages for quick and easy identification of the forms being used for a particular Funding Opportunity Announcement or individual application package.

NIH will introduce application packages with a Competition ID of ‘FORMS-C’ following the schedule outlined in NOT-OD-13-074.

**Changes to Grants.gov federal-wide forms included in ‘FORMS-C’ packages**

**SF424 (R&R) Cover**

◆ A new field for the ‘Previous Grants.gov Tracking ID’ will be included in item 4 of the SF424 (R&R) cover. Form behavior will be adjusted so that applications with Application Type of ‘New’ require an entry in the ‘Previous Grants.gov Tracking ID’ field rather than requiring an entry in the ‘Federal Identifier’ field.

◆ The Person to be contacted section of the Applicant Information on the SF424 (R&R) cover will be expanded to include the additional contact information we have been including on the PHS 398 Cover Page Supplement form.

◆ The additional contact information will be removed from the PHS 398 Cover Page Supplement.

◆ The label for the ‘SFL or other Explanatory Documentation’ on the SF424 (R&R) cover will be changed to ‘SFLLL (Disclosure of Lobbying Activities) or other Explanatory Documentation.’

◆ A new ‘Cover Letter Attachment’ will be added to the SF424 (R&R) cover.

◆ We will no longer use a separate PHS Cover Letter form. However, NIH will continue to keep the Cover Letter separate from the assembled application image and available only to authorized staff.

**Other Project Information**

◆ The question ‘Does the Project have an actual or potential impact on the environment’ has been changed to ‘Does the Project have an Actual or Perceived Impact – positive or negative – on the environment.’

**R&R Budget and associated subaward budget**

◆ Bug fix; expanding ‘Number of Participants/Trainees’ allowed on cumulative budget from 999 to 9999 (currently maxing out the number on all the budget periods causes the application to fail because the form doesn’t allow a bigger number for the cumulative total)
R&R Sr/Key Person Expanded
◆ Allowing data entry for up to 100 Sr/key persons (old limit was 40)
◆ Biosketch will continue to be required on Adobe forms, but will not be enforced by Grants.gov systems for system-to-system submissions
◆ eRA will enforce the inclusion of biosketch for every Sr/Key person through post-submission agency validations

Project/Performance Site Locations
◆ Allowing data entry for up to 300 sites (old limit was 30)

Changes to PHS forms included in ‘FORMS-C’ packages

Planned Enrollment Report form & Cumulative Inclusion Enrollment Report Form
◆ Adding optional inclusion forms in our packages to allow for the collection as discrete data rather than pdf attachments
◆ Removing attachment fields from PHS Research Plan, PHS Career Development Award Supplemental Form and PHS Fellowship Supplemental Form

PHS 398 Career Development Award Supplemental Form
◆ Removing Inclusion attachments
◆ Adding a new attachment for ‘Letters of Support from Collaborators, Contributors, and Consultants’
◆ Renaming attachment from ‘Career Development/Training Activities During Award Period’ to ‘Candidate’s Plan for Career Development/Training Activities During Award Period’
◆ Renaming attachment from ‘Mentoring Plan’ to ‘Candidate’s Plan to Provide Mentoring (as applicable)’
◆ Changing form section header from ‘Statements of Support’ to ‘Statements and Letters of Support’
◆ Form adjustments to format and numbering

PHS Fellowship Supplemental Form
◆ Removing Inclusion attachments
◆ Updating OMB Number to ‘0925-0001’
◆ Form adjustments to format and numbering

PHS 398 Research Plan
◆ Removing Inclusion attachments
◆ Form adjustments to format and numbering
PHS 398 Training Program Plan
◆ Removing ‘Application Type’ section
◆ Removing ‘Research Training Program Plan Attachment’ header
◆ Renaming attachment field from ‘Introduction to Application (for REVISION or RESUBMISSION applications only)’ to ‘Introduction to Application (for RESUBMISSION or REVISION only)’
◆ Form adjustments to format and numbering

PHS 398 Training Subaward Budget Attachment Form
◆ Allowing for up to 30 subaward budget attachments instead of 10

PHS 398 Cover Page Supplement
◆ Removing Applicant Organization Contact information that will be included on SF424 R&R cover
◆ Add fields from PHS 398 Checklist form
  ◆ We will no longer use the separate PHS 398 Checklist form
◆ Allowing for collection of up to 200 stem cell lines (previous limit was 20)
Top Ten Tips on Negotiating Efficiently with Industry

Sherylle Mills Englander, University of California, Santa Barbara

University-industry collaborations are in an exciting phase, reaching new levels of activity across the country. There are many advantages to both sides in working together – universities are able to provide companies with high quality research on targeted projects on an as-needed basis, while introducing the company to some of the country’s best and brightest emerging scientists and engineers. Companies provide streamlined funding opportunities (no formal proposals or nine month peer review periods), potential jobs for graduating students and an opportunity to work on exciting projects that are not necessarily fundable through traditional federal sources. At times, getting that research agreement in place can take significant effort. In this time of doing more with less, an increase in new industry contracts can quickly become a big challenge. How do you get negotiations with industry accomplished in the most efficient manner? Perhaps these Top 10 Tips can help:

1. Did the company send the right agreement? If the agreement does not seem to make any sense or will requires hours of detailed revisions, ask yourself whether the company sent the right template. Perhaps the company sent a private consultant agreement, the agreement they use to purchase “widgets,” or, in the case of life sciences, a clinical trial agreement instead of a basic research agreement. In these situations, it is much more efficient to call the company negotiator to request the right template or send your own research agreement for consideration rather than spend hours converting the proffered draft into the “right” agreement.

2. Know when to call and when to email. If you are dealing with overarching principles or complex ideas, if you need to understand why certain terms were included or if you need to know the other side’s expectations, it is usually most efficient to talk on the phone. And before the start of any complex negotiation, a “kick off” teleconference is invaluable to establish rapport and understand the expectations of each side. In contrast, if you are choosing more precise wording or making a series of minor modifications, sending a revised draft via email will be sufficient. If you try to email about complex ideas, or if you get on the phone describing routine or minor changes, you lose efficiency.

3. Identify true “dealbreakers” up front, before detailed redlines. As a breed, negotiators hate using the word “dealbreaker” since it pretty much ends the normal give and take and changes the dynamic to a “take it or leave it” scenario. That said, if you are truly faced with one or more dealbreakers that your university simply cannot accept, it is better to get on the phone and identify the dealbreakers up-front to see if the company has any flexibility rather than spend hours on detailed redlines, only to have the deal fall through after all that work due to fundamental principles (Of course, let your PIs know if you are in this situation to prevent them from receiving a shock!). And, sometimes, a project is so close to the company’s “crown

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jewels” that it is simply not appropriate for the open, decentralized university environment. Again, better to know that at the beginning.

4. Know WHY a change is requested and articulate it. Instead of relying on a citation of university “rules”, provide an explanation, with examples, of why the contract term causes significant problems in the university environment, how it can create unreasonable or undesired results, or how it can cause legal angst for the university. Typically, a negotiator does not feel particularly compelled to change standard terms just because the other side has decided to make a unilateral rule about it. Most university policies and practices are based on logical, reasonable rationales and the practical realities of the university research environment – know the rationales and realities and educate your counterpart about them to give the company negotiator a logical basis to make the requested change the first time you request it. And, if you get a change from a company negotiator that you do not understand, ask them for the purpose of the change before getting wrapped up in extensive rewording or wholesale rejections – sometimes if you know the explanation, a quick solution is right under your nose.

5. Make it easy for the company to accept your change. Sending an email or letter that outlines all of your requested changes (e.g., “in Section 5, change 30 days to 60 days”), instead of a redlined contract, creates a lot of busy work for the company negotiator because each agreed-upon change has to be entered manually by the company negotiator into the draft agreement. In this situation, it is only human for an overworked negotiator to resent making any changes at all. Make it easy for your counterpart to accept your requests by sending a redlined draft of the agreement. If a modification to the language is needed, take the time to draft new language directly into the agreement so the company negotiator does not need to spend time creating the language necessary to accommodate your request. They can then quickly “accept” or “reject” as they read through the draft. (Hopefully doing more “accepting” than “rejecting”!)

6. Put explanatory comments directly into the draft agreement. Just like you, a company negotiator will often need to get approvals on changes from multiple sources. Putting the background of why you need a particular change directly into the draft agreement next to highlighted change (i.e., using the “Comment” feature in Word) saves you time by allowing you to comment as you draft and eliminating the need for you to draft an explanatory cover email or letter. The company negotiator is also able to communicate the background to his or her stakeholders efficiently since the comments are incorporated directly into the draft agreement. Help the company negotiator by using a form that lets the people “behind the scenes” immediately understand and evaluate why the request was made without the need to refer to multiple documents or communications (Make sure to tell them in your cover email that the comments are in the agreement!).

7. Enlist the help of your PI. It is fairly unusual for contract negotiators to know each other before the negotiation. In contrast, there is a good chance that your PI already knows his technical contacts at the company from previous projects, conferences or even graduate school. And, the company’s technical contacts were
graduate students themselves and often understand the university’s core academic needs, such as protecting the right to publish. If the company’s technical contacts understand the negotiation challenges, they may be willing to work closely with the company negotiators to find work-arounds.

8. Know the company’s history with your university. Did they sponsor research before? If so, can you simply use the same terms as the last agreement? Nothing is simpler or more efficient if you can do that. If you have a solid agreement from a previous interaction, let the company negotiator know you are willing to bypass negotiations and work under the same terms as last time. There’s a good chance they will appreciate your efficiency.

9. Consider master agreements, when appropriate. If you work regularly with a particular company and have arrived at a set of terms that work well for both parties, consider putting a master agreement in place. Master agreements let you add new projects through a simple amendment or task order – once the scope of work and budget are agreed-upon, just add it to the master and get started on the research!

10. Use your NCURA connections! If you are experiencing negotiation challenges and know another university has worked with the same company, reach out to that other university. There’s a good chance they may have already faced the same challenges – and perhaps even solved them. After over a decade in this field, I can definitively report that legal constraints may have limited the amount of information that could be provided, but I have never had a plea for help go unanswered from an NCURA colleague. You have a great community – let them help you!

About the Author

Sherylle Mills Englander is the Director of the Office of Technology & Industry Alliances (TIA) at the University of California, Santa Barbara. Her office negotiates intellectual property licensing and research agreements with industry. Ms. Englander first came to UCSB as Director of its Sponsored Projects Office. She can be reached at englander@tia.ucsb.edu


\[2520.13\] **Multidisciplinary Proposal Development**¹

Kevin Dressler, Lorraine Mulfinger, and Niki Page, Pennsylvania State University

**Defining the Problem**

If all faculty were as organized and self-disciplined as the fictional Sheldon Cooper (CBS’ *Big Bang Theory*), wouldn’t our jobs as Research Administrators (RAs) be simpler for the typical research grant application? Where is the episode that shows us how the diverse and interdisciplinary science team of Sheldon, Leonard, Amy, Raj, Bernadette and Howard sit down to write a grant together? Even with Sheldon Cooper’s compulsive need for organization and attention to detail, we imagine the “Winning the Big Grant” episode of the *Big Bang Theory* to end in total chaos and frustration. Can you picture it? At 4:59 PM, everyone is huddled into the RAs office, holding their breath and waiting for the Grants.gov spinning disk to release a tracking number. Only to receive the fatal error message that leads to a missed deadline and an emotional “Big Bang”. In the real-world of proposal development, the disastrous result of this illustration is all too possible. Large interdisciplinary proposal development offers complex challenges and, although many elements and challenges are similar to single investigator proposals, the volume and complexity is arguably more difficult to balance given the collaborative nature and time constraints in grant submission. Thus, task timelines are proposed as a means to avoid chaos and errors in the submission process.

**Planning to Plan**

Developing a plan is the first step toward successfully reaching any major milestone, and grant writing is no different (Russel and Morrison, 2011). The major U.S. funding agencies all caution applicants on planning, some more succinctly than others. The National Institutes of Health (NIH) clearly lists as a preparatory step in the grant writing process to, “Develop a feasible timeline with draft application deadlines. Be realistic about the time it can take to write and revise the application” (U.S Department of Health and Human Services, 2012). The National Science Foundation (NSF) mentions among “Other Considerations” to “Organize a good working team. Distribute duties and develop a firm schedule of activities needed to prepare the proposal in time to meet the proposal deadline” (NSF, 2004). While neither NIH nor NSF suggest the length of time necessary to develop a good proposal, the 90 day window that is minimal for many special calls from the NSF suggest that no less than 12 weeks should go into the planning of any proposal application. The following process challenges us to think about distinct proposal phases, key players and submission timelines.

While putting together a credible proposal in only 12 weeks is a challenge for any experienced single investigator who is pre-equipped with data and references, the difficulty can easily compound when a mid-career investigator steps forward.

¹ This article is reprinted from *NCURA Magazine*, Volume XLV, No. 2, March / April 2013. It is used with permission of the publisher.
to orchestrate his/her first large multidisciplinary proposal development team. The mix of multiple research units, institutions, complex budgets, cost share, and management plans can push even the best PI over the edge. With the 12 week challenge in mind, we set out to devise a model timeline (Figure 2520-13.1; also see Purdue University, 2013) that identifies the major tasks involved in the development of large, multidisciplinary proposals. As the timeline was developed, it became clear that the roles and responsibilities of participating faculty and RAs needed to be considered as coordination that is central to the success of concentric activities.

We acknowledge that a “one size fits all” concept cannot be applied to research administration or grant development at all institutions, but the basic tenets are transferrable. Keeping this in mind, the three phases of the timeline and understanding the type of work in each of those phases are the transferrable concepts. We envision the Principal Investigator (PI) using this model to prevent “task slippage” that will ultimately lead to an insurmountable backlog of work in the last 5 days of the deadline. Guarding against such a pressurized time window is a central challenge that drives the typical RA and Development Specialist (DV) as both project managers and catalysts in the process (Porter, 2005).

Three Phases of Proposal Development

Our timeline is divided into three distinct phases (Figure 2520-13.1; Framing, Collaboration and Refinement). The phases are nominally broken into equal time periods; however, overlaps do occur, and they are provided as a high-level way of understanding whether a team is “behind” or “ahead” in planning resources. Thus, the phases represent a macro-planning guide in which the PI, DV, RA and Advocate (AV), can monitor major milestones and detect delay in the process. For example, notice the three blue triangles in Figure 2520-13.3. In each phase there is a natural point at which the AV can give feedback to the PI and/or make decisions about future resource investments in the proposal. In the framing phase, a good time for AV involvement is immediately after the goals, vision, themes and discriminators have been defined. In this way, the AV remains engaged at critical feedback points in the collaboration and refinement phases.

Each participant has distinct roles and responsibilities throughout the three planning phases (Figure 2520-13.2). Depending on the type of institution and specialized needs within the proposal, adjustments could be made to these descriptions at the beginning of any proposal planning process to better coordinate and improve the chances of success.

Sustainable Process

To translate the idea of a sustainable proposal development model, in terms of personnel resources invested, we have conceptualized the amount of effort that might be required of both the PI and the RA+DV support team (Figure 2520-13.3). We lump RA and DV by adding them together to show the macro differences between the faculty (PI) effort and the combined effort of administration-related functions. In this figure, the personnel time commitments in Figure 2520-13.1 (above) were equally weighted and transferred into a 40-hour work week for a hypothetical
Figure 2520-13.1. 12 Week timeline for large interdisciplinary proposal development

<table>
<thead>
<tr>
<th>Goal Proposal Process – 12 Week Example</th>
<th>Framing Phase</th>
<th>Collaboration Phase</th>
<th>Refinement Phase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analysis and Planning</td>
<td></td>
<td></td>
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<tr>
<td>Distribute RFP; Gather Intelligence; Recruit PI</td>
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<tr>
<td>Finalize Key Participant &amp; Potential Collaborator Lists</td>
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<tr>
<td>Problem Development</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Define Vision &amp; Goals; Identify Themes/Discriminators</td>
<td>PI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Develop Proposal Outline &amp; Estimate Budget</td>
<td>PI/RA</td>
<td></td>
<td></td>
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<tr>
<td>Cost Share Discussion w/ Advocate</td>
<td>PI/RA/DV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify Resources for Complex Admin Issues (e.g., IP)*</td>
<td>PI/RA/DV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assess Needs and Coordinate Institutional Data</td>
<td>PI/RA/DV</td>
<td></td>
<td></td>
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<tr>
<td>Refine Outline with Project team</td>
<td>PI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify &amp; Draft Potential Graphics</td>
<td>PI</td>
<td></td>
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<tr>
<td>Program Officer Input</td>
<td></td>
<td></td>
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<tr>
<td>Contact Program Officer/Advisors for Feedback</td>
<td>PI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refine Outline/Themes with Project Team</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Partnerships</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recruit External/Internal Partners</td>
<td>PI/DV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Refine External/Internal Partner Involvement</td>
<td>PI/DV</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solicit and Obtain Support Letters</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Management/Personnel</td>
<td></td>
<td></td>
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<tr>
<td>Identify Management Structure</td>
<td>PI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Collect and Edit Biosketches/C&amp;Ps/Appendices</td>
<td>PI/RA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final Check on Participant List</td>
<td>PI/RA/DV</td>
<td></td>
<td></td>
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<tr>
<td>Write and Secure Internal Commitment Letters</td>
<td>PI/RA/DV</td>
<td></td>
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<tr>
<td>Budget</td>
<td></td>
<td></td>
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<tr>
<td>Construct 1st draft of Internal (PSU) budget</td>
<td>PI/RA</td>
<td></td>
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<tr>
<td>Determine External Partner Needs and Distribution</td>
<td>PI/RA</td>
<td></td>
<td></td>
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<tr>
<td>Determine Cost Share Needs (if any); schedule MCM</td>
<td>PI/RA</td>
<td></td>
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<tr>
<td>Refine Overall Budget</td>
<td>PI/RA</td>
<td></td>
<td></td>
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<tr>
<td>Secure Cost Share (if any)</td>
<td>PI/RA</td>
<td></td>
<td></td>
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<tr>
<td>Final Budget and Justification</td>
<td>PI/RA</td>
<td></td>
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<tr>
<td>Proposal Writing</td>
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<td></td>
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<tr>
<td>Assign writing sections</td>
<td>PI</td>
<td></td>
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<tr>
<td>Write Section Components</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Compile Draft 1</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Writing Team Edit</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Red Team Review</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Address Red Team Comments</td>
<td>PI/DV</td>
<td></td>
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<tr>
<td>Editing Iterations</td>
<td>PI/DV</td>
<td></td>
<td></td>
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<tr>
<td>Compliance Checks and PIAF Signoff</td>
<td>PI/DV</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

= Advocate Approval; Note: Blue Coded text indicates Advocate Involvement
Final Budget (external partners included) 1 week prior to deadline
Final technical pieces and supplemental documents 48 hours prior
**Timeline is adapted from Purdue University (2013)**
### Figure 2520-13.2. Roles and responsibilities by phase of proposal timeline

<table>
<thead>
<tr>
<th>Player</th>
<th>Phase 1: Framing</th>
<th>Phase 2: Collaboration</th>
<th>Phase 3: Refinement</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Principal Investigator (PI)</strong>&lt;br&gt; <em>Needs to be supportive of the 12-week plan. Ultimately controls the process, but relies on key players to complete tasks and stay on the timeline.</em></td>
<td>• Finalize key participant &amp; collaborator list; Recruit partners&lt;br&gt;• Define proposal outline (incl. Vision, Goals, &amp; Themes)&lt;br&gt;• Start writing assignment outline&lt;br&gt;• Identify graphics&lt;br&gt;• Draft/estimate budget&lt;br&gt;• Identify necessary University resources (Admin Issues, Space, Data, Cost Share)&lt;br&gt;• Interpret solicitation, and identify appropriate teaming strategies</td>
<td>• Refine partner participation; identify external commitment letters&lt;br&gt;• Finalize writing assignments&lt;br&gt;• Identify management structure&lt;br&gt;• Refine budget and cost share&lt;br&gt;• Identify internal commitment letters&lt;br&gt;• Compile technical plan draft text and prepare for University review</td>
<td>• Track writing assignments &amp; follow-up with missing contributions&lt;br&gt;• Finalize management structure&lt;br&gt;• Finalize budget, justification and cost share&lt;br&gt;• Finalize Commitment Letters (internal/external)&lt;br&gt;• Review technical plan and make final edits based on University review&lt;br&gt;• Verify that Institutional approvals have been obtained to submit the proposal</td>
</tr>
<tr>
<td><strong>Advocate (AV)</strong>&lt;br&gt; <em>Needs to be identified by University and PI. We recommend an institutional administrator (i.e. Research Dean, Institute Director, Department Head)</em></td>
<td>• Participate in University limited submission process&lt;br&gt;• Contact with PI to verify necessary University resources (space, cost share, admin support)&lt;br&gt;• Verify that the PI has completed initial proposal vision/goals outline</td>
<td>• Verify writing assignments and draft text components are on track.&lt;br&gt;• Support the PI</td>
<td>• Participate in the proposal University review&lt;br&gt;• Support the PI&lt;br&gt;• Verify that University approvals have been obtained to submit the proposal</td>
</tr>
<tr>
<td><strong>University</strong></td>
<td>• Organize limited submission process&lt;br&gt;• Select and support PI/Advocate with necessary resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Development Specialist (DV)</strong>&lt;br&gt; <em>Are typically Masters or PhD-level professionals who serve as catalysts in the proposal process and participants in writing/editing</em></td>
<td>• Serve as a catalyst in University limited submission process&lt;br&gt;• Assist PI in conceptualizing&lt;br&gt;• Draft/estimate budget&lt;br&gt;• Identify necessary University resources (Admin Issues, Space, Data, Cost Share, outreach, diversity)&lt;br&gt;• Interpret solicitation, and identify appropriate teaming strategies</td>
<td>• Refine partner participation&lt;br&gt;• Coordinate drafts for non-technical proposal pieces&lt;br&gt;• Assist w/ commitment letters (internal/external)&lt;br&gt;• Help compile technical plan draft text and prepare for University review&lt;br&gt;• Edit text if necessary</td>
<td>• Assist w/ finalizing commitment letters&lt;br&gt;• Coordinate and make final edits based on University review</td>
</tr>
<tr>
<td><strong>Research Administrators (RAs)</strong>&lt;br&gt; <em>University authority for proposal submission. Assist w/ compliance, budget and administrative functions.</em></td>
<td>• Draft/estimate budget&lt;br&gt;• Identify necessary University resources (Admin Issues, Space, Data, Cost Share)&lt;br&gt;• Interpret solicitation, provide feedback; contact sponsor if necessary</td>
<td>• Contact participants for Biosketches, Current/Pending Support, CIO tables, Appendix material&lt;br&gt;• Refine budget and cost share&lt;br&gt;• Assist w/ commitment letters (internal/external)&lt;br&gt;• Compile draft text</td>
<td>• Finalize budget, justification and cost share&lt;br&gt;• Assist with finalizing commitment letters&lt;br&gt;• Review proposal text for compliance issues&lt;br&gt;• Verify that University approvals have been obtained to submit the proposal</td>
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</table>
well-managed team. Team member effort may vary greatly across different types of proposals, but few would disagree with the realization that procrastination by team members early in the process leads to long work days in the last week and increases the likelihood of errors and missed opportunities in the application. Figure 2520-13.3 demonstrates that even minor reductions in activities during Framing and Collaboration Phases could create workloads significantly exceeding a 40 hour week in the Refinement Phase, if you were to shift those earlier unspent hours and add them to the hours already needed in the Phase. This “shortening” of Refinement Phase activities introduces a risk in proposal quality by reducing or eliminating the precious time necessary for improving proposal drafts and securing collaborative involvement, considered valuable for success. Further, last minute work typically involves more distracted effort due to the need to interrupt planned work schedules for other proposals and responsibilities that were designed around efficient scheduling.

**Final Thoughts**

This model timeline is not intended as a “one size fits all” approach, but the three distinct phases serve as modules that are transferrable and may be adapted to any specialized institutional or proposal needs. Our focus on planning is a topic every research office deals with and discussion converges to a universal tenet: Careful planning and conscientious attention to timelines help avoid the all-nighters the week before submission and proclivity for errors or missed opportunities in proposals. We hope the 12 week planning guide: 1) Serves as a starting place for planning of personnel and other resource decisions for a sustainable proposal process, 2) Gives the RA a tool for assisting PIs in understanding the differences between single-investigator and large multidisciplinary efforts, and 3) Provides a time and content guided framework for collaboration among a diverse set of professionals...
all in an effort to avoid the Big Bang.

Acknowledgements

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References


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Crowdfunding: Navigating the New Frontier in Research Funding and Administration

Natasha Chopp, Michigan Technological University; Patience Graybill Condellone, Southern Illinois University Edwardsville; and Jerry B. Weinberg, Southern Illinois University Edwardsville

As grant agencies’ budgets face reduction and proposal volumes increase, crowdfunding is becoming a viable alternative funding source for research, technology transfer, and support for the arts. Crowdfunding is the act of collectively raising funds by pooling together small donations from many individuals. Successful crowd-funding campaigns require the creation of awareness through social media and networks, such as alumni networks, institutional Facebook pages, or Internet communities (Wheat, Wang, Byrnes, and Rangathan, 2012). People across the world, through the Internet, donate to initiatives that are important to them or in their network. By harnessing the power of the crowd, funds are raised, and a goal is fulfilled in support of the proposed project.

Crowdfunding as an Alternative Funding Source

How does crowdfunding work? Projects are posted on a crowdfunding site that includes a description of the project (what the project is, why it is important, and how the funds will be used), a funding goal, and a time limit to raise the funds. Some project creators might even offer rewards to entice donors. The project leader then raises awareness about the project, attempting to raise the necessary funds within the timeframe. Depending on the policies of the crowdfunding site, after the time is expired, the project creator may receive all or none of the pledge contributions, depending on whether the funding goal was met.

A variety of websites specialize in facilitating crowdfunding by connecting the project organizer with potential donors. Crowdfunding websites also provide the financial services of collecting and delivering funds that have been raised. Each website has its own policies, fees, and regulations, and crowdfunding sites tend to specialize in the types of projects they post and promote. Sites such as Kickstarter.com and Crowdtilt.com appeal to a general audience and allow fundraising for social projects (such as parties and gifts), commercialization or start-up projects, as well as research or creative projects. Other websites specialize in research and creative activities; for example, Petridish.org and Scifundchallenge.org focus on science, while Artistshare.com is for musical endeavors. Such sites may be useful to research institutions and have already been discovered by some faculty members and the mainstream media (like NPR’s Science Friday) as a new frontier in today’s research climate.

When looking for an appropriate crowdfunding site it is important to know that three general crowdfunding models prevail: pre-sale, donation-based, and equity-

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1 This article is reprinted from NCURA Magazine, Volume XLV, No. 5, October/November 2013. It is used with permission of the publisher.
based (Stanco, Popma, and Totterman, 2013). Pre-sale crowdfunding raises money for commercialization of products. For institutions of higher education, this is an appropriate means for technology transfer. Typically people pledge funds with the expectation of receiving the end product. Equity-based crowdfunding is open only to accredited investors who are pledging for an equity stake in a start-up company. Donation-based crowdfunding sites allow people to donate to a project or cause. Typically these sites are registered non-profits that will issue receipt of a donation for tax purposes. Donation-based crowdfunding is most appropriate for research and creative projects.

Within these crowdfunding models, there are two main funding categories: all-or-nothing or all-donation. In all-or-nothing funding, a minimum pledge threshold is set, and it must be met in order to receive funds. If the goal is not met, donors are not charged and the project leader receives nothing. In some cases, the primary investigator has the option to either take none of the pledged contributions or pay a higher percentage fee in order to keep the pledges. In all-donation funding, the proposer may keep all donations.

It is easy to imagine how crowdfunding can potentially transform the research funding climate. Investigators, not solely dependent upon federal funding politics and peer review, can now access a broader, diverse, and perhaps more open-minded audience willing to support riskier projects. Artists may use the web’s inherently visual base to better promote their work. Institutions can use their own crowdfunding sites to target their angels and alumni. At our respective universities, Southern Illinois University Edwardsville and Michigan Technological University, we have been exploring the possibilities for crowdfunding platforms to fill the funding gap for our projects while also developing individual approaches that navigate the particular challenges we face as universities and/or sponsored research offices.

The Challenges

Individuals wishing to raise funds via crowdfunding must do so with awareness to the particular challenges of this market. Thousands of projects are posted on websites, creating high competition. Strong marketing strategies are required to attract interested donors. Often, the all-or-nothing game challenges proposers to not only set reasonable thresholds but also to strategize the best way to raise funds necessary to complete the project. As crowdfunding becomes more popular in academia, questions are being raised about the regulation of projects funded through such open sources and the role of the institution administering crowd-funded projects. If a faculty member uses institutional resources, the institution has an interest in regulating the use of its resources, and in keeping the crowdfunding project in line with compliance matters. Federal regulations require that institutions maintain consistent practices in managing and ensuring the compliance of externally-sponsored projects. Posting a project on a crowdfunding site becomes particularly delicate if the researcher wants to conduct a project that, say, uses human subjects.

Intellectual property (IP) is also at stake: does the crowdfunding portal ask the applicant to relinquish claims to IP? By posting crucial information regarding ideas
prior to provisional patent applications, the investigator’s and the institution’s IP may be at risk. An examination of a crowdfunding site’s policies and close review of information being disclosed in the campaign will need to occur for the university to protect their IP rights.

Furthermore, donors often have high expectations for outcomes gained through the project, and institutions have the responsibility of ensuring funds are spent appropriately. Wise proposers manage the expectations of their audiences and keep the donors updated about progress, lest they face the wrath of the individual donor wanting a refund! Donors want the assurance of prudent financial management of a project that should be offered by an institutional accounting system. Meanwhile, universities will desire to protect their institutional brand by regulating the types of projects advertised in their name and with their facilities. At state institutions like ours, we are careful to avoid the use of public funds and facilities for private gain, and the potential outcomes of projects that must be closely monitored. These matters raise questions about how to best track and report on a project: How does one communicate with the donors “post-award”? What is involved in reporting?

Finally, what is the best way to classify these crowd-funded projects—as gifts or grants? While the donations may be best considered donations, how does an institution manage the compliance, intellectual property, financial, reporting, and institutional brand issues above if there is no monitoring of the project? Is this an issue for the foundation or for the sponsored research office? While some foundations may have the mechanisms and network to attract donors, they may not have the accounting or compliance tools available to the sponsored research office. Many of the answers to these questions lie in the existing framework of an institution and the capabilities of different offices to manage aspects of an externally-funded/crowd-funded project.

**Our Two Models**

At Southern Illinois University Edwardsville, we have established a hybrid model that employs the strengths of both the Foundation and the Office of Research and Projects (ORP). Our Foundation has great community connections and marketing ability not available to the ORP, but unfortunately has none of the ORP’s accounting structure or compliance and IP monitoring abilities.

Faculty members hoping to use university resources for a project are asked to route a proposal for internal approval as they would other grants or contracts. Required materials include a description of the project, a budget, budget justification, and completion of our grant vs. gift checklist. The routing allows ORP and other administrators to stay abreast of the research activity occurring with their resources, as well as review of the project for important issues related to compliance, budgeting, and IP. The ORP can also be involved in budgeting and setting strategic funding threshold goals. Applicants are asked to include a small administrative fee of 10% for budgets of $10,000 or less and 15% for budgets greater than $10,000 to help recover administrative fees charged by the crowdfunding host and the University’s own F&A costs.
Once the project has received approval, the project director will receive assistance from University Marketing in finding an appropriate portal and in developing a marketing plan with the university brand. Donations will be collected and run through Foundation accounts. This allows the project director access to the networking power of the Foundation and flexibility of a 501(c)(3). Donors receive their tax benefit through the Foundation. However, financial management of the project will be handed over to a grant accountant in the ORP who has the tools and knowledge to keep the project consistent with institutional accounting and reporting practices. Project directors will be asked to provide a final report on the project and proof of its distribution to the donors in order to keep them informed about the project.

Superior Ideas, our second model, is a crowdfunding platform, created and managed by Michigan Technological University, and open to any university to post projects on. Superior Ideas helps bring university research and public service projects that support science, technology, engineering, and math (STEM) to life. The mission is to increase external support for research, innovation, and creative work that promotes sustainable economic and social development.

Superior Ideas is an all-donation based model: every donation goes to the project regardless if the project funding goal is met or not. Projects are submitted online through the Superior Ideas website and then reviewed by the Superior Ideas team. The required materials include pictures, a description of the project, a budget breakdown, and an explanation of how the donations will be used. The team evaluates the proposed project based upon the type of research performed and whether or not it fits into Superior Ideas’ overall mission. If it does not meet the set requirements, the project will not be posted.

Once the project is approved by the Superior Ideas team, it is posted on the site and can accept donations. Since Superior Ideas is an entity of Michigan Tech, donations are processed through the Michigan Tech Fund, which is a not-for-profit, tax exempt corporation [501(c)(3)]. When a donation is made online, a receipt is generated and emailed to the donor acknowledging their contribution.

Figure 2520-14.1. Popular crowdfunding websites & affiliates include:

- Kickstarter.com http://www.kickstarter.com
- Rockethub.com http://www.rockethub.com
- Petridish.org http://www.petridish.org
- Scifundchallenge.org http://scifundchallenge.org
- Innovocracy.org http://www.innovocracy.org
- Indiegogo.com http://www.indiegogo.com
- Artistshare.com http://artistshare.com/v4
- Artspire.org http://artspire.org/home.aspx
- Crowdtile.com https://www.crowdtile.com
- Microryza.com https://www.microryza.com
If the project creator is from Michigan Tech, the donated amount is transferred at the end of the crowdfunding period into a restricted spending account in the Office of the Vice President for Research. If the project creator is from another university, the donated amount is transferred to an appointed liaison at that university. That university will determine the appropriate means to disperse funds to the project creator since every university has their own procedures.

Superior Ideas does subtract 7.5% from the final donated amount to cover the credit card processing fee and administrative costs. Even though the donation is a gift, the money is only allowed to be applied to the project.

As we explore this new frontier in research support on our campuses, the needs of the researchers, the institution, and our donors are sure to catalyze change in our crowdfunding models. In the meantime, we continue to recruit faculty members willing to be pioneers in the practice of opening their research to the crowd.

References

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Establishing Efficient Contract Turn-Around Processes
Sarah Lampson, Canadian Association of University Research Administrators, and Katie Porter, Hamilton Health Sciences

Contracts are a necessary step in research collaboration but are often viewed as a hurdle that delays research. In clinical research, institutions and investigators need new medicines for their patients, some of whom have no other treatment options and sponsors are eager to get their drugs to market as every day that delays the drug approval is costing the sponsor money. With both sides highly motivated, why are contract negotiations often so prolonged and what can contract negotiators do about it? Hamilton Health Sciences Corporation has been consistently recognized by sponsors as one of the most efficient sites for contract completion – in the top three in Canada. A contracts coordinator and 1.5 contract negotiators handled over 500 agreements with each initial review completed within 10 days of contract receipt. Here the Hamilton Health Sciences (HHS) Team shares their top 10 tips on how to get agreements to signature more quickly:

1. Try a template.
Template agreements are an excellent investment of time if the parties work together frequently. If one party cannot enter into a template then perhaps you can both agree to use the same contract language repeatedly, even if you cannot officially commit to it for all future agreements.

2. Use a checklist.
A quick scan of the agreement, aided by a checklist of required clauses, will quickly highlight what’s missing so you can focus on those areas first. After proposing appropriate wording, review the remaining wording and align with your institution’s standards.

3. Identify your timelines.
Educate the other party on your timelines and needs. How quickly do you typically complete the initial contract review and send back changes? What are your objectives and what do you need from the other party to achieve them? At HHS the contract timeline is carefully tracked; from the initial review through negotiations and even the circulation for sign-off. The Contracts Team owns the process and is accountable for the total number of days it takes to complete the process. Timeliness on the sponsor side significantly impact HHS’ ability to achieve their goals. When a contracts negotiator is absent she always provides the sponsor with the contact of her back-up whom she has briefed.

4. Start the process promptly.
As soon as HHS receives a contract, the contracts coordinator enters it in the da-

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1 This article is reprinted from NCURA Magazine, Volume XLV, No. 4, August 2013. It is used with permission of the publisher.
tabase and the clock starts ticking. This ensures all team members have it on their radar as it is captured in our weekly reports. The Contracts Team follows up with sponsors on all agreements at least every 2 weeks to make sure nothing slips through the cracks.

5. Be clear about your expectations.
Stating non-negotiable items up front makes it easier for both parties to see common ground as well as promptly identify which issues need to be escalated for approval. Parties can increase transparency, and therefore negotiation speed, by including a link to their policies on their website. Overhead rates, preferred contract language and institutional signatories can all be identified here and accessed by sponsors as they prepare the draft agreement. HHS follows principles established by the Council of Academic Hospitals of Ontario, which is affirmed by a link on the HHS research webpage. While reviewing the agreement, always propose alternate language for consideration and provide your rationale for the request to educate the other party as to exactly what you need and why.

6. Have a backup plan.
If an issue arises that you are having trouble resolving efficiently, have an alternate plan to implement promptly. Is there a colleague that could help you by providing a different perspective on troublesome wording? HHS contract reviewers established an e-group of peers nationally so they have over a hundred experts to consult in confidence at any time. Can you refer the matter to a more senior administrator for direction or a final decision?

7. Explain the process.
When and if you have to escalate a decision, explain to the other party what the timeline for the decision is and which party will be making the final call. Follow up to make sure the decision is made in a timely manner and communicate back to the other party as soon as you know whether you can move forward or not.

8. Pick up the telephone.
Unfortunately, the opportunity to meet is rare, so connect by telephone. Telephone conversations are the quickest way to negotiate and also help build rapport.

If you are not clear on an explanation, sense frustration in an email or are receiving information about a third party you doubt – verify it. Ask for more information, clarification or confirmation. When HHS contract reviewers are told other sites are accepting terms that it cannot, the contracts specialist calls the third party to confirm and learn how the third party resolved the issue.

10. Invest in long-term solutions.
Continue the dialogue beyond the contract. Solicit feedback annually from your sponsors and researchers. How does your institution rank as an efficient research
partner? What are their frustrations? What hurdles can you jump for them? This will give you a good sense of opportunities to address impediments to research.

Contribute to harmonization efforts. Find out which groups in your field and geographic area are working on standardizing contract negotiation language and get involved. Reducing contract negotiation times is better for everyone! Contract negotiators need not feel threatened by standard language, more efficient administration processes will help attract more research and expand, not eliminate your role. Think big picture and invest your strategic thinking in long-term solutions.

The Contracts Team at HHS is always focused on the main objective – supporting research – which helps us rise above the routine busyness and demands of a typical day. Getting treatments to the bedside more quickly is a very powerful and tangible goal and one we always keep on our radar. By continuously improving our processes and setting ambitious targets we play our part in ensuring accurate contract negotiations.

About the Authors

Sarah Lampson, since this article was written, has left Hamilton Health Sciences to serve as the Executive Director of the Canadian Association of University Research Administrators. Sarah has co-authored 2 books on research administration which are used by research administrators at over 350 institutions globally. Sarah can be reached at executive_director@caura-acaru.ca.

Katie Porter is the Clinical Research Agreements and Contracts Specialist at Hamilton Health Sciences where she also serves on the Research Ethics Board. She has worked in research administration for 15 years, negotiating both clinical and non-clinical research contracts, and overseeing a variety of projects and programs. She is a frequent speaker throughout Canada and the United States, and is a lecturer at McMaster University. A passionate educator, Katie is also the co-author of Steer Your Career: A Research Administrator’s Manual for Mapping Success, the definitive volume on career planning for research administrators and the A to Z Guide to Research Contract Review, a one of a kind manual for research contract professionals. For her contribution to the research management profession internationally, she was thrilled to be awarded the “Excellence Award, Advanced Level” by the Society of Research Administrators International in 2012. Katie can be reached at porter@hhsc.ca.
\subsection*{2520.16 \textbf{New Biographical Sketch Format Required for NIH and AHRQ Grant Applications}}

National Institutes of Health

\textbf{Notice Number:}
NOT-OD-15-032

\textbf{Key Dates}
Release Date: December 5, 2014

\textbf{Related Announcements}

\textbf{Issued by}
National Institutes of Health (NIH)
Agency for Healthcare Research and Quality (AHRQ)

\textbf{Purpose}
This Notice supersedes NOT-OD-15-024 about the NIH and AHRQ requirement for use of a new biosketch format and provides some latitude in the transition for those who have already been compiling biosketches for their large grant applications with deadlines in early 2015.

NIH and AHRQ encourages applicants to use the newly published biosketch format for all grant and cooperative agreement applications submitted for due dates on or after January 25, 2015, and will require use of the new format for applications submitted for due dates on or after May 25, 2015. Applicants may submit using the new biosketch format for due dates before January 25, 2015, if they wish.

\textbf{New Format}
The revised forms and instructions are now available on the SF 424 (R&R) Forms and Applications page and adjustments have been made to improve their usability.

Individual fellowships, R36 dissertation grants, and diversity supplements should use the Fellowship Application Biographical Sketch Format Page and related pre-doc and post-doc instructions and samples, while research grant applications, career development, training grant, and all other application types should use the general Biographical Sketch Format Page and instructions and sample.

The new format extends the page limit for the biosketch from four to five pages, and allows researchers to describe up to five of their most significant contributions to science, along with the historical background that framed their research. Investigators can outline the central findings of prior work and the influence of those findings on the investigator’s field. Investigators involved in Team Science are provided the opportunity to describe their specific role(s) in the work. Each description can be accompanied by a listing of up to four relevant peer-reviewed publications or other non-publication research products, including audio or video products; patents;
data and research materials; databases; educational aids or curricula; instruments or equipment; models; protocols; and software or netware that are relevant to the described contribution. In addition to the descriptions of specific contributions and documentation, researchers will be allowed to include a link to a full list of their published work as found in a publicly available digital database such as MyBibliography or SciENcv.

**Tool to Help Build the New Biosketch**

The Science Experts Network Curriculum Vitae (SciENcv, http://www.ncbi.nlm.nih.gov/sciencv/), which serves as an interagency system designed to create biosketches for multiple federal agencies, will be updated by the end of December to support the new biosketch format and to address some issues found in testing.

SciENcv pulls information from available resources making it easy to develop a repository of information that can be readily updated and modified to prepare future biosketches. A YouTube video (https://www.youtube.com/watch?v=PRWy-3GXhtU&feature=youtu.be) provides instructions for using SciENcv.

**Additional Information**

Note that having a different biosketch format than other applications being reviewed in the same panel is not grounds for appeal.


**Inquiries**

Please direct all inquiries to:

- Grants Information
- Office of Extramural Research (OER)
- National Institutes of Health (NIH)
- Phone: 301-435-0714
- Email: GrantsInfo@nih.gov

Many research administrators want to know what “piece” they play in developing their institution’s large proposal process.

This is the very question we asked ourselves more than a year ago while trying to determine how universities focus and expand their pre-award activities to win the illusive Big ONE.

We’ve all noticed the heavy increase in sponsor demands, a simultaneous trend toward collaborative, large-scale, multi-investigator awards, and the growing phenomenon of “team science.” These are but a few of the puzzle pieces that universities need to fit together when positioning pre-award resources. These trends are leading many major research institutions to consider new avenues to enhance support for multi-investigator teams that have accepted the challenge of developing a complex, interdisciplinary application. To better understand how universities are supporting their faculty and research portfolios, the Pennsylvania State University and Huron Consulting Group teamed up to survey leading research institutions currently supporting large research proposals at their respective institutions.

Our goal was to gather additional puzzle pieces to get a clear picture of what today’s landscape looks like. We were fortunate to have 20 respondents of the 100 invited top-ranked research institutions (NSF, 2014b) participate in our survey. A descriptive profile of these institutions is provided below in Figure 2520.17-1.

Figure 2520.17-1. Profile of survey participants

The Penn State/Huron survey was designed to determine how large proposals are currently supported at different research institutions. The survey objectives were seemingly simple: 1) to characterize the large proposal support models, and 2)

1 This article is reprinted from NCURA Magazine, Vol XLVIII No 3, May / June 2016. It is used with permission of the publisher.
determine a possible correlation between funding success rates and proposal support services and the models themselves. Our support models included LPO (Large Proposal Office) offices, LPO-type activity across different units, and combinations of support elements that can range from fully-centralized to fully-decentralized (See Figure 2520.17-2).

**Figure 2520.17-2. Survey Support Models**

A **key focus** of the study was to better understand whether an institution supports strategic or large (i.e. >$1 million, multi-persons/site) proposals differently than other proposals, and if so, how. Success in our initial base line study was only measured as the percent of submitted proposals that were ultimately funded by the target agency (i.e. funding rates).

As can occur in research, there were no absolute results from our 20 participants that would solve every institution’s large proposal support puzzle, only more questions and theories of missing pieces. Our team hosted follow-up webinars with the survey respondents and presented our findings at conferences. We learned there was no one-size-fits-all model; rather, there are many ways to support a research institution’s growing portfolio and future strategic proposal hit rate. What we did find are some important steps institutions are taking to support large efforts, including:

◆ Establishment of a specialized Large Proposal Office (LPO)
◆ Institutional level commitments for team building and development capacity
◆ Recruitment of partners and key faculty to strategically prepare for future opportunities
◆ Faculty quality surveys to measure institutional support and possibility of repeat attempts
◆ Incentives for faculty: teaching buy-outs, travel support, administrative support

As mentioned above, we set out to investigate three strategic puzzle pieces all research institutions are faced with:

Target Strategic Proposal Puzzle #1: Collaborations across Science Disciplines

As discussed in detail in Mulfinger et al., 2016, there has been an increased emphasis by funding agencies on collaborations across scientific disciplines, evident in the growth of multiple principal investigator (multi-PI) grants and larger average award sizes. This trend is highlighted by new target programs in the most common of federal sponsors such as NSF, NIH, and DOE.

As previously reported (NSF, 2014c), the incidence of multi-PI grants has increased more than 18 percent over the period 2004-2013 which significantly outpaced the increase in single PI awards. One should also note that the NIH has also experienced a massive growth for multi-PI grants over the period 2006 to 2013 (National Research Council Board on Behavioral, Cognitive, and Sensory Sciences Division of Behavioral and Social Sciences and Education, 2015). The NIH growth has directly resulted in a current allocation of multiple PI projects that is approximately one fifth of the external awards (Chronicle Staff, 2014).

So how does a university support these new relationships and collaborative efforts? Our survey suggested a key corner piece to our puzzle - more institutional-level focus on the cross pollination of ideas and interdisciplinary science teams. University endorsed Institutes or Centers can be a breeding ground for such collaborations that need to be cultivated and supported with internal seed funding. These focused units also supply other physical support infrastructure for a team environment such as communication, data management, and user facilities for jointly-used equipment. Team building is not a simple process; it takes time to foster these unique and interdisciplinary relationships. Management of such awards should be a priority as well and may mean non-traditional thinking about budget structures and multi-PI responsibilities in operations and management.

Target Strategic Proposal Puzzle #2: Team Collaborations for High Dollars

As team science continues to evolve, agencies have responded by creating more collaborative high dollar awards. Between 2000 and 2014 (OMB, 2014), a general influx of more awards in either or both the $1-$5M and $5M-$25M ranges has been reported across at least four major agencies: NIH, NSF, USDA, and DoD.

Our survey was designed to dig into the details of these higher funding value awards. After all, these are the strategic investments that create new ideas in our research institutions and are highly sought after by all. We wondered, “Is there a more efficient or unique way to handle these applications? Have some institutions found the optimal set of missing puzzle pieces and increased their hit rates for these larger award values?”

We asked our survey participants to report proposal funding success rates across five dollar ranges defined by $250K steps up to $1M. These results are summarized in Figure 2520.17-3 as below $1M and above $1M. As expected, proposals above $1M had a lower hit rate as an averaged group (25%) than all ranges (48%).
A clear trend is evident for a lower hit rate as proposal values increase. Of interest, however, is the larger range of institutional success rates for proposals above $1M. This uniquely larger range implies that certain institutions may have adjusted their approach to better their odds in winning higher dollar applications.

**Figure 2520.17-3. Proposal Funding Success Rates**

![Bar chart showing proposal funding success rates.](image)

Data adapted from Mulfinger et al., 2016.

Is there enough information to show that more institutional resources seem to be working on larger efforts? It appears that more universities are inviting their institutional experts to join the proposal development team to help with data metrics, cost volumes, facilities, and management structures.

**Target Strategic Proposal Puzzle #3: Collaborative Research Support**

Is it just us, or have sponsors raised the bar to a new level? Have we moved to a more complex 3D puzzle eclipsing our mastery of the more traditional 2D-type? It seems every year more and more changes are implemented under funding opportunities. Some are technical in nature such as data management plans, increasing management requirements with explicit milestone and timeline coordination, outreach, diversity, and education components which require special attention to institutional data and regional, national or even global impacts. Many of these sponsor requirements are non-technical and lean more on the administrative side of proposal preparation. What is an institution to do? Are there better research administrative service support models to assist with large, complex, collaborative, and strategic applications?

Figure 2520.17-4 (below) showcases the results from the 20 participant institutions. The data analysis sought a correlation of proposal success rates with any of the six models for large proposal support reported by institutions.

When analyzed with respect to >$1M funding rates, we found a clear diversity in support model infrastructure among the institutions with 50% employing a combination of models. The College, Departments, and Centers (CDC) support model
was most prevalent and present in 70% of the institutions. Only three institutions reported separate LPO models.

**Figure 2520.17-4. Support Models across Survey Participants**

The study’s conclusive findings were: 1) The decentralized College/Department/Center model is the most commonly used large proposal support model, 2) large proposal offices and units have similar criteria in selecting proposals to be supported, the most common of which is awards equaling or exceeding $1M, and 3) institutional setting is a factor in success rates for larger proposals. The baseline study provided a clear line at $1M but as the value of proposals continues to increase, the next higher class of award values should be defined and studied (e.g., >$5M or greater), as indicated by many respondents during follow-up conversations.

**Piecing It All Together**

Our baseline survey provided valuable information about how research institutions are currently supporting their strategic efforts, but there is more to discover. While there may not be a perfect model for winning, there surely are common support activities that foster these wins.

For all, success metrics are key when evaluating resources. Should success be measured on wins alone? What about sparking and helping to fuel a researcher’s passion? If an institution can alleviate a bulk of the administrative proposal components, it would free our scientists to do what they do best – science. If an interdisciplinary team came together for one effort but several smaller groups spun out other ideas, isn’t that a win? Do we “dare to dream” when a principal investigator of a 20+ person team is excited about resubmitting or leading another collaborative effort for additional funding opportunities?

Another metric that was not measured is faculty response to large proposal support services. Compiling this type of feedback may reveal another piece of how the programmatic and administrative components may perform better when envisioning an institution’s future.

What else can we do? Our baseline survey demonstrated a positive trend when the amount of personnel time spent on large proposals was considered. There may not be one right way to win, but it’s certain that institutions need to think about how
trends towards large-scale collaborative research should influence their strategic planning in its administrative support. What we do know is that one key puzzle piece is an enthusiastic research support office willing to go the extra mile for their team. Will you be the missing piece of the success puzzle for winning large proposals?

References

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Practical Tools

This section includes guidance and tools — flowcharts, checklists, etc. — relating to the functions of pre-award services. These materials are culled from a variety of authoritative sources.

Checklist for Research Collaborations *

Howard Gadlin and Kevin Jessar

The list included below may be a good start in your facilitating the process of collaboration between researchers. In devising any agreement or plan, be sure to consult with your general counsel, as appropriate and particularly when ownership of intellectual property is likely to arise. — Eds

People often assume that since they share an interest in the same research area and have complementary skills and areas of expertise, things will just work out. But scientific collaborations, like other important relationships, take some forethought and some ongoing work to succeed. …

Most often, problems arise in scientific collaborations because the scientists failed to explicitly define their expectations of one another. We believe that framing a partnering agreement at the outset of the research project can help enormously in setting the collaboration on a solid footing. Ideally, the agreement spells out exactly what the roles and contributions of each scientist will be and provides a mechanism for decision making for major issues such as authorship, additional collaborations, and the sharing of biological materials.

Some people prefer written partnering agreements signed by the key collaborators. For others, a written agreement feels too legalistic, too much like a contract. Written agreements may offer the advantage of being less ambiguous than each party’s selective recall of what was agreed to, but we believe that it is most important that collaborators commence their project by anticipating, discussing, and resolving possible areas of disagreement. Moreover, the parties can jointly define a process for constructively handling disputes should they arise in the future.

Although each research project has unique features, certain core issues are common to most of them and can be addressed by collaborators posing the following questions:

* This material is excerpted from Howard Gadlin, NIH Ombudsman and Kevin Jessar, Associate Ombudsman, The NIH Catalyst, “Preempting Discord: Prenuptial Agreements for Scientists,” Vol. 10, No. 3, May–June 2002, www.nih.gov/catalyst/2002/02.05.01/page6.html. The NIH Catalyst is published bimonthly for and by the intramural scientists at NIH. The NIH Office of the Ombudsman (www4.od.nih.gov/ccr), Center for Cooperative Resolution “is a neutral, independent, and confidential resource providing informal assistance to NIH scientists, administrators, and support staff in addressing work-related issues.”
◆ What are the scientific issues, goals, and anticipated outcomes or products of the collaboration? When is the project over? Are all members of the research team on the same wavelength regarding these issues?

◆ What are the expected contributions of each participant?

◆ Who will write any progress reports and final reports?

◆ How will you decide about redirecting the research agenda as discoveries are made?

◆ What will be your mechanism for routine communications among members of the research team (to ensure that all appropriate members of the team are kept fully informed of relevant issues)?

◆ How will you negotiate the development of new collaborations and spin-off projects, if any?

◆ How, and by whom, will personnel decisions be made? How and by whom will personnel be supervised?

◆ What will be the criteria and the process for assigning authorship and credit?

◆ How will credit be attributed to each collaborator’s institution for public presentations, abstracts, and written articles?

◆ How and by whom will public presentations be made?

◆ How and by whom will media inquiries be handled?

◆ When and how will you handle intellectual property and patent applications?

◆ How and by whom will data be managed? How will access to data be managed? How will you handle long-term storage and access to data after the project is complete?

◆ Should one of the principals of the research team move to another institution or leave the project, how will you handle, data, specimens, lab books, and authorship and credit?

Of course, it is easy to imagine that for any particular research project there might be additional specific questions that should be added to this list.

Many potential collaborators can answer these questions simply by getting together and talking things out. For some people a neutral third party, with no involvement in the project, can help facilitate such discussions and maximize their effectiveness.
2530.2 **Sample ‘Biosketch’**

AIS editors

As part of the National Institute of Health’s new application format, changes are being made to the biographical sketch, including the addition of a personal statement and a limit on the number of publications or manuscripts to no more than 15. A sample biosketch demonstrating the new format is included below (and at http://grants.nih.gov/grants/funding/2590/biosketchsample.pdf). For other changes to NIH’s application process, see its Enhancing Peer Review Web site at http://enhancing-peer-review.nih.gov.

A review of this biosketch format may also prove helpful when completing applications for an agency other than NIH.
BIOPGRAPHICAL SKETCH

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. DO NOT EXCEED FOUR PAGES.

<table>
<thead>
<tr>
<th>NAME</th>
<th>POSITION TITLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>eRA COMMONS USER NAME (credential, e.g., agency login)</td>
<td></td>
</tr>
</tbody>
</table>

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE (if applicable)</th>
<th>MM/YY</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
</table>

NOTE: The Biographical Sketch may not exceed four pages. Follow the formats and instructions on the attached sample.

A. Personal Statement

Briefly describe why your experience and qualifications make you particularly well-suited for your role (e.g., PD/PI, mentor, participating faculty) in the project that is the subject of the application.

B. Positions and Honors

List in chronological order previous positions, concluding with the present position. List any honors. Include present membership on any Federal Government public advisory committee.

C. Selected Peer-reviewed Publications

NIH encourages applicants to limit the list of selected peer-reviewed publications or manuscripts in press to no more than 15. Do not include manuscripts submitted or in preparation. The individual may choose to include selected publications based on recency, importance to the field, and/or relevance to the proposed research. When citing articles that fall under the Public Access Policy, were authored or co-authored by the applicant and arose from NIH support, provide the NIH Manuscript Submission reference number (e.g., NIHMS97531) or the PubMed Central (PMC) reference number (e.g., PMCID234567) for each article. If the PMCID is not yet available because the Journal submits articles directly to PMC on behalf of their authors, indicate "PMC Journal - In Process." A list of these Journals is posted at: http://publicaccess.nih.gov/submit_process_journals.htm. Citations that are not covered by the Public Access Policy, but are publicly available in a free, online format may include URLs or PMCID numbers along with the full reference (note that copies of publicly available publications are not accepted as appendix material.)

D. Research Support

List both selected ongoing and completed research projects for the past three years (Federal or non-Federally-supported). Begin with the projects that are most relevant to the research proposed in the application. Briefly indicate the overall goals of the projects and responsibilities of the key person identified on the Biographical Sketch. Do not include number of person months or direct costs.
Hunt, Virginia Lively

**BIOGRAPHICAL SKETCH**

Provide the following information for the Senior/key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. **DO NOT EXCEED FOUR PAGES.**

**NAME**

Hunt, Virginia Lively

**POSITION TITLE**

Associate Professor of Psychology

**eRA COMMONS USER NAME (credential, e.g., agency login)**

hun\v

**EDUCATION/TRAINING** *(Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.)*

<table>
<thead>
<tr>
<th>INSTITUTION AND LOCATION</th>
<th>DEGREE (if applicable)</th>
<th>MM/YY</th>
<th>FIELD OF STUDY</th>
</tr>
</thead>
<tbody>
<tr>
<td>University of California, Berkeley</td>
<td>B.S.</td>
<td>05/90</td>
<td>Psychology</td>
</tr>
<tr>
<td>University of Vermont</td>
<td>Ph.D.</td>
<td>05/96</td>
<td>Experimental Psychology</td>
</tr>
<tr>
<td>University of California, Berkeley</td>
<td>Postdoctoral</td>
<td>08/98</td>
<td>Public Health and Epidemiology</td>
</tr>
</tbody>
</table>

**A. Personal Statement**

The goal of the proposed research is to investigate the interaction between drug abuse and normal aging processes. Specifically, we plan to measure changes in cognitive ability and mental and physical health across a five-year period in a group of older drug users and matched controls. I have the expertise, leadership and motivation necessary to successfully carry out the proposed work. I have a broad background in psychology, with specific training and expertise in key research areas for this application. As a postdoctoral fellow at Berkeley, I carried out ethnographic and survey research and secondary data analysis on psychological aspects of drug addiction. At the Division of Intramural Research at the National Institute on Drug Abuse (NIDA), I expanded my research to include neuropsychological changes associated with addiction. As PI or co-Investigator on several previous university- and NIH-funded grants, I laid the groundwork for the proposed research by developing effective measures of disability, depression, and other psychosocial factors relevant to the aging substance abuser, and by establishing strong ties with community providers that will make it possible to recruit and track participants over time. In addition, I successfully administered the projects (e.g., staffing, research protections, budget), collaborated with other researchers, and produced several peer-reviewed publications from each project. As a result of these previous experiences, I am aware of the importance of frequent communication among project members and of constructing a realistic research plan, timeline, and budget. The current application builds logically on my prior work, and I have chosen co-investigators (Drs. Gryczynski and Newlin) who provide additional expertise in cognition, gerontology and geriatrics. In summary, I have a demonstrated record of successful and productive research projects in an area of high relevance for our aging population, and my expertise and experience have prepared me to lead the proposed project.

**B. Positions and Honors**

**Positions and Employment**

1998-2000 Fellow, Division of Intramural Research, National Institute of Drug Abuse, Bethesda, MD
2000-2002 Lecturer, Department of Psychology, Middlebury College, Middlebury, VT
2001- Consultant, Coastal Psychological Services, San Francisco, CA
2002-2005 Assistant Professor, Department of Psychology, Washington University, St. Louis, MO
2005- Associate Professor, Department of Psychology, Washington University, St. Louis, MO
Other Experience and Professional Memberships

1995- Member, American Psychological Association
1998- Member, Gerontological Society of America
1998- Member, American Geriatrics Society
2000- Associate Editor, Psychology and Aging
2003- Board of Advisors, Senior Services of Eastern Missouri
2003-04 NIH Peer Review Committee: Psychobiology of Aging, ad hoc reviewer
2005-09 NIH Risk, Adult Addictions Study Section, member

Honors

2003 Outstanding Young Faculty Award, Washington University, St. Louis, MO
2005 Excellence in Teaching, Washington University, St. Louis, MO
2008 Award for Best in Interdisciplinary Ethnography, International Ethnographic Society

C. Selected Peer-reviewed Publications (Selected from 42 peer-reviewed publications)

Most relevant to the current application

Additional recent publications of importance to the field (in chronological order)
Program Director/Principal Investigator (Last, First, Middle):  Hunt, Virginia, L.

D. Research Support

Ongoing Research Support

R01 DA942367-03  Hunt (PI)  09/01/07-08/31/12
Health trajectories and behavioral interventions among older substance abusers
The goal of this study is to compare the effects of two substance abuse interventions on health outcomes in an urban population of older opiate addicts.
Role: PI

R01 MH922731-05  Merryle (PI)  07/15/05-06/30/10
Physical disability, depression and substance abuse in the elderly
The goal of this study is to identify disability and depression trajectories and demographic factors associated with substance abuse in an independently-living elderly population.
Role: Co-Investigator

Faculty Resources Grant, Washington University  08/15/09-09/14/11
Opiate Addiction Database
The goal of this project is to create an integrated database of demographic, social and biomedical information for homeless opiate abusers in two urban Missouri locations, using a number of state and local data sources.

Completed Research Support

K02 AG442898  Hunt (PI)  09/01/06-08/31/09
Drug Abuse in the Elderly
Independent Scientist Award: to develop a drug addiction research program with a focus on substance abuse among the elderly.
Role: PI

R21 AA998075  Hunt (PI)  01/01/04-12/31/06
Community-based intervention for alcohol abuse
The goal of this project was to assess a community-based strategy for reducing alcohol abuse among older individuals.
Role: Co-Investigator
### Postdoctoral Researcher Mentoring Plan

National Science Foundation

Section 7008 of the America COMPETES Act, passed in 2007, requires a principal investigator to include in his or her National Science Foundation grant proposal a postdoc mentoring plan, if postdocs are to be funded under the proposal. The mentoring plan must not exceed one page. The following sample Postdoctoral Researcher Mentoring Plan was prepared by NSF (see www.nsf.gov/eng/iip/sbir/Sample_Postdoc_Mentoring_Plan.doc).

**Sample Plan**

This Postdoctoral Researcher Mentoring Plan has been prepared by <organization name>. The Plan establishes guidelines for work to be performed by a Postdoctoral Researcher in support of the NSF <SBIR or STTR> <Phase I or Phase II> Project Awarded to <company name>, entitled “<title of project>”. The Postdoctoral Researcher assigned to the project will work in <name/university> laboratory and will conduct research on <name tasks>.

1. **Orientation** will include in-depth conversations between <company researcher name> and the Postdoctoral Researcher. Mutual expectations will be discussed and agreed upon in advance. Orientation topics will include (a) the amount of independence the Postdoctoral Researcher requires, (b) interaction with coworkers, (c) productivity including the importance of scientific publications, (d) work habits and laboratory safety, and (e) documentation of research methodologies and experimental details so that the work can be continued by other researchers in the future.

2. **Career Counseling** will be directed at providing the Postdoctoral Researcher with the skills, knowledge, and experience needed to excel in his/her chosen career path. In addition to guidance provided by <post-doc researcher name>, the Postdoctoral Researcher will be encouraged to discuss career options with researchers and managers at <university name> and with former students and colleagues of <post-doc researcher name>.

3. **Experience with Preparation of Grant Proposals** will be gained by direct involvement of the Postdoctoral Researcher in proposals prepared by <company name>. The Postdoctoral Researcher will have an opportunity to learn best practices in proposal preparation including identification of key research questions, definition of objectives, description of approach and rationale, and construction of a work plan, timeline, and budget.

4. **Publications and Presentations** are expected to result from the work supported by the grant. These will be prepared under the direction of <post-doc researcher name> and in collaboration with researchers at <company name> as appropriate. The

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1 Additional resources can be found at the National Postdoctoral Association (www.national-postdoc.org/mentoring), Federation of American Societies for Experimental Biology (www.faseb.org/portals/0/pdfs/opa/idp.pdf), and Association of American Medical Colleges (www.aamc.org/research/postdoccompact).
Postdoctoral Researcher will receive guidance and training in the preparation of manuscripts for scientific journals and presentations at conferences.

5. **Teaching and Mentoring Skills** will be developed in the context of regular meetings within *<university name>* research group during which graduate students and postdoctoral researchers describe their work to colleagues within the group and assist each other with solutions to challenging research problems, often resulting in cross fertilization of ideas.

6. **Instruction in Professional Practices** will be provided on a regular basis in the context of the research work and will include fundamentals of the scientific method, laboratory safety, and other standards of professional practice. In addition, the Postdoctoral Researcher will be encouraged to affiliate with one or more professional societies in his/her chosen field.

7. **Technology Transfer** activities will include regular contact with researchers at *<company name>*. The Postdoctoral Researcher will be given an opportunity to become familiar with the university-industry relationship including applicable confidentiality requirements and preparation of invention disclosure applications.

8. **Success of the Mentoring Plan** will be assessed by monitoring the personal progress of the Postdoctoral Researcher through a tracking of the Postdoctoral Researcher’s progress toward his/her career goals after finishing the postdoctoral program.
2530.4 Grant Application Tips From NIH
National Institutes of Health, Office of Extramural Research

Most Common Components of NIH-Funded Applications
1. New or original idea with potential for scientific impact
2. Projects of high scientific caliber
3. Solid qualifications for the investigator and key personnel
4. A clear statement of need or problem statement
5. Pilot data (essential for R01s; less critical for Fs and Ks)
6. A focused, incisive research plan
7. A defined budget plan
8. Knowledge of published relevant work
9. Experience in the essential methodology
10. Future direction and contingency plans

Tips for Submitting a Successful Proposal
1. Understand the NIH grant process
2. Begin with a good idea. Ask yourself the following:
   • Will the idea advance scientific knowledge?
   • What do my colleagues think?
   • Did I talk to an NIH program official?
3. Check out funding opportunities, Institute/Center priorities, and currently funded projects
4. Determine your institution’s submission policies. Ensure you complete all registration requirements before applying.
5. Find out if you are a new or Early Stage Investigator (special opportunities available).
6. Learn what works and what doesn’t work in applications, the scope of the project should be reasonable, and the research plan should be well written. Be clear about why the research is important.
7. Develop collaborations to fill in gaps and be explicit about them in your proposal.
8. Determine the appropriate application, review funding opportunity announcements details, and read application guide instructions.
9. Make a good impression by creating a reviewer-friendly proposal. Use text, tables, and headers the help with organization.
10. If at first you don’t success … try, try again. Use your Summary Statement to improve your next grant application, talk to NIH Program Officials for guidance, and review guidelines for resubmitting an amended application.
Helpful links:
RePORT (data on NIH-funded research): www.RePORT.nih.gov
Application Basics: www.grants.nih.gov/grants/grant_basics.htm
To help new and established applicants submit better applications, CSR asked current and recent study section chairs to share their personal insights on producing a highly competitive NIH grant application. They responded with great enthusiasm.

**Don’t jump too fast into writing your application:** Since the most critical parts are the summary and specific aims sections, write a one-page summary page with specific aims first and share it with someone who is experienced, has their own funding or—ideally—someone who has served on a study section. If you can’t wow them, start again and use the time you saved to come up with some fresh ideas.

**Propose something significant:** It is a real turn-off to read an application that is basically a re-hash of a previous project with a new issue. The same goes for “me too” research. Identify an area of current controversy and importance within your field. Make it something that would interest more people than you and your co-workers. Will it be important to clinicians or other investigators? Are you dealing with key questions or controversies in the field?

**Good ideas don’t always sell themselves:** Tell me why it’s important up front in the background section, and I’ll be ready to roll. Tell me what’s known and what isn’t known and how, after you complete your studies, you’ll move the field forward or answer important questions. A lot of people really are unaware of how absolutely important it is to tell the reviewer from the beginning why it’s worth doing. If you’re seeking an incremental advance over what’s known, it’s essential to justify it.

**Make it exciting:** I love to see fresh, well-supported ideas that have a good hypothesis behind them that could really open up an area. And I find it both exciting and intellectually stimulating to encounter new approaches to major problems and research that could advance both clinical and basic science. Even if it’s somewhat high risk, if it comes with a good hypothesis and you can test it, I’d find it very exciting.

**Probe for mechanisms and seek new models.** We need to know how something happens—not just what happens. With this knowledge we can affect outcomes and design something to prevent something from happening. If you don’t know what’s happening on the bench, you’re not going to move to the bedside with any reproducible or knowledgeable treatment.

**Avoid proposing to “collect more data.”** It might help you to set up the system, but if it is not critical to fundamental understanding, do not dwell on it. Although some experiments might take a lot of time to perform, they will not necessarily qualify as specific aims.

**Be very clear** and very concise about what you want to do, why it’s important, and what you expect to get out of it. Keeping it clear doesn’t mean doing away with

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1 [http://public.csr.nih.gov/ApplicantResources/Pages/Links.aspx](http://public.csr.nih.gov/ApplicantResources/Pages/Links.aspx)
complexity. Just make sure your general sense and key questions come across very clearly throughout your proposal.

Don’t assume too much: Not all reviewers will have the same in-depth, highly expert, knowledge you do. Avoid any unnecessary technical jargon, and write your application assuming it will be reviewed by intelligent scientists who have a breadth of knowledge around your area. So consider getting a researcher at your institution who isn’t an expert in your field to read your application and tell you how well it flows.

Be brief with stuff everyone knows: Lots of people go too far describing routine laboratory methods, which just take up space and really distract reviewers. It gives the message that the applicant is not really as organized as they should be. New investigators, however, should make a little more effort to show that the techniques they proposed to use are within their capabilities.

Let your light shine: Don’t be bashful in telling reviewers your important strengths both in your biosketch and in relevant parts of your application.

Don’t be overly ambitious: Trying to cover too much territory with one application is perhaps the most common mistake applicants make.

Don’t overstate the significance of your research. It’s great if you can say your results could one day have an impact on treating or preventing disease. But don’t promise more than you can deliver. You really need to make more than a general case for significance. Explain the specific significance of the particular question you’re asking and how your results may fill important technical or knowledge gaps or otherwise impact your field.

Aim each aim: Lay out the rationale for each aim. Spend time on the Expected Outcomes, Data Interpretation, Pitfalls, and Contingencies section for each of them. The “expected outcomes” section shows you’ve got a logical strategy. The section on Data Interpretation gives insight into your depth of understanding the problem. The Pitfalls section shows how familiar you are with the proposed techniques and methodologies. Finally, in discussing alternative strategies, you can give us confidence you are able to deal with the problems that arise when experiments don’t work as expected.

Make your aims sing and harmonize: Quickly lay out the broad context, the scientific question to be addressed, including its significance, and exactly how you propose to advance understanding of your problem. Craft your aims carefully so reviewers will see both their individual and synergistic worth.

Pull it together: At the end of your research strategy section, have a succinct, one paragraph summary of what you intend to do, how you intend to do it and what it is going to tell you. Write it like a manuscript abstract. It is really helpful at the very end if I can get the take home message.

Focus your preliminary data: Insert a very succinct paragraph to explain what the preliminary data really tell you and how they show the feasibility of your proposed research. Make your application compelling by citing preliminary or prior work that shows the feasibility of each of your aims. Also, don’t assume your
reviewers will remember all your preliminary data from the significance section. If you have a lot, you may want to briefly refer to a key bit in your research strategy section.

Sleep on it: After you’ve written your application, reflect on the details and the big picture. Shedding unnecessary details and presenting a broader view of your proposed research may make it more exciting, particularly to reviewers who are not over-the-top experts in your field.

Don’t test the waters to see how reviewers like your initial ideas or let them find the limitations for you. Find the limitations yourself and discuss them in the application.

Don’t cram your application like a suitcase: I cringe when I open up an application that is wall-to-wall words. I also have a difficult time with numbered references (because they require readers to constantly flip back to the reference section) and statements such as “See the reprint in the appendix for details.” I love to see spaces between paragraphs, spaces between sections, and figure legends I don’t need to bring up the PDF magnification to 200x to read. Try writing your application without using the maximal margins and smallest allowable font.

Proofread your application. Better yet, have someone else proofread it!

Know your audience and pitch your application to it: Explore CSR’s study sections in your area. After checking out the guidelines and rosters online, request one you think could best review your application. Contact one of CSR’s scientific review officers if you are unsure.

Seek guidance from NIH program directors before and after your reviews. They can help you focus your proposed research, understand your reviews and guide your next steps.

The key word is persistence. Half the applications reviewed are not discussed. So don’t despair. You’re in good company. Go through your critiques with your investigators. If there’s a fatal flaw, stand back and then decide the best route to take next time. But usually the weaknesses are fixable. Make a stronger application, and re-submit.
### 2530.6 Proposal Budget Preparation Under Uniform Guidance Quick Guide

Emory University

The Office of Management and Budget (OMB) has combined many federal circulars into a single guidance document (known as Uniform Guidance, or 2 CFR 200) that can be used by all agencies. The information below is being made available to provide some guidance in preparing budgets for proposals that for awards that are anticipated to be issued under Uniform Guidance. Uniform Guidance is expected to be effective for all awards issued December 26, 2014 or later. Other than NSF, individual agencies have not yet provided individual agency guidance. As those become available, the document below will be updated and further communication will be provided.

#### Uniform Guidance Implementation

<table>
<thead>
<tr>
<th>CHARGING ADMINISTRATIVE/ CLERICAL AND PROGRAMMATIC SALARY COSTS</th>
<th>Administrative and clerical salaries (in certain circumstances) AND programmatic salary costs can be included on competitive and non-competitive proposal budgets.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicable Uniform Guidance (UG) Sections: 200.413 200.430</td>
<td>Administrative and Clerical Salaries: In general, administrative and clerical salaries should still not be direct charged, but the rules governing “major project or activity” exceptions have been dropped and replaced by the following criteria, all of which must be met:</td>
</tr>
<tr>
<td></td>
<td>1. Administrative or clerical services are integral* to a project or activity;</td>
</tr>
<tr>
<td></td>
<td>2. Individuals involved can be specifically identified with the project or activity;</td>
</tr>
<tr>
<td></td>
<td>3. Such costs are explicitly included in the budget or have the prior written approval of the Federal awarding agency; and</td>
</tr>
<tr>
<td></td>
<td>4. The costs are not also recovered as indirect costs.</td>
</tr>
</tbody>
</table>

*Emory University has determined that integral means: (1) the services are essential, vital, or fundamental to the project or activity; AND (2) are currently determining a minimum FTE that will be generally acceptable to budget unless there are documented special circumstances. For current budgeting purposes, please use this option for a minimum of 25% FTE or discuss the special circumstances with OSP for further consideration. (A formal decision regarding this will be announced in January/February after NIH’s guidance is received.)

If all of these requirements are met, PIs/departments must explicitly include these costs in the proposal budget and narrative to facilitate the required agency approval. They must explain why these costs are integral. We recommend including the statement shown in bold in the below example:

**EXAMPLE:** *“This award includes the management of 15 subawards. This volume and the tight timeline of the project mandate more extensive monitoring than the services routinely provided by the department. AXX% time assistant is needed to oversee the subrecipients’ activities, including working with the central office to perform risk assessment and subrecipient monitoring, ensuring timely delivery and review of invoices, acquiring progress reports and ensuring their review, resolving mid-project issues, monitoring compliance approvals, ensuring timely payments, and handling subaward modifications. We are therefore requesting agency approval for a [List% time appointment here] [List position title here] as an administrative cost allowed under 2CFR 200.413.”*
Examples of projects that could meet the definition of “integral”:

- Large, complex programs, such as Clinical and Translational Science Awards, program projects, research centers, and other grants and contracts that entail assembling and managing teams of investigators from a number of institutions.
- Projects which involve extensive data accumulation, analysis and entry, surveying, tabulation, cataloging, searching literature, and reporting (such as epidemiological studies, clinical trials, and retrospective studies of clinical records).
- Projects that require making travel and meeting arrangements for large numbers of participants, such as conferences and seminars.
- Projects where the principal focus is the preparation and production of manuals and large reports, books, or monographs (excluding routine progress and technical reports).
- Projects that are geographically inaccessible to normal departmental administrative services, such as research vessels, and other field research remote from campus.
- Projects requiring significant amounts of project-specific database management; individualized graphics or manuscript preparation; human or animal protocols, and multiple project-related investigator coordination and communications.

NOTE: Programmatic Salary Costs
Costs related to protocol development and maintenance, managing substances/chemicals, managing and securing project-specific data, and coordination of research subjects are allowable direct costs when they are “contributing and directly related to work under an agreement.” Thus, these programmatic costs may be direct charged using the same underlying requirements as other types of direct costs, and are not subject to the extra approval requirements required of administrative and clerical costs. They are still subject to all regular costing requirements (e.g., allocability, reasonableness, allowable by terms of the award, incurred within award period). **Please note that the costs of time spent on proposal preparation, departmental administration or any costs that do not directly benefit the award charged are not allowable.

AT TIME OF AWARD

- If a proposal is submitted with the required statement/justification (as shown above), and an award is subsequently issued by the federal agency without explicitly deleting the administrative cost, the NOGA will reflect approval to charge the requested cost. After award issuance, unless prohibited by the terms of the award, any post-award addition in the percentage of effort that does not exceed 25% of the amount approved by the sponsor may be incurred without additional federal approval. An addition greater than 25% must be requested from the federal sponsor as shown below. Reductions may be incurred without agency approval; however, PIs must recognize that this may still be questioned by auditors since the proposal indicated that such costs were necessary. PIs should be prepared to explain how the function was performed or why it was no longer needed.
- An administrative or clerical employee’s time may be fully or partially charged to sponsored projects with the balance charged to non-sponsored fund sources.
  - For example, an employee’s effort might be direct charged 25% time to one PI’s project, 20% to another PI’s project, and 55% to non-sponsored activities.
- If any portion of the employee’s time is direct-charged to a sponsored project, the employee must certify his or her effort via the effort reporting system.

AGENCY APPROVALS NEEDED DURING THE AWARD

- If new or additional (over 25% of the amount previously approved) administrative or clerical support is needed during the life of the award, PIs must write a letter to their federal program officer or the federal grants officer (as dictated by the federal agency) requesting approval to direct charge the new/additional administrative services. These letters must be signed by the PI, be prospective (not retroactive) and include the following:
  - The percentage of effort, time period needed, and estimated cost to the project (salary, fringe benefits, and associated indirect cost)
  - An explanation from what budget category the funds will be rebudgeted
  - How the services are integral to the project
The letter must be countersigned by OGCA, who will then submit the request to the agency. PIs should allow a minimum of 30 days for an agency response. Upon receipt of an approval, OSP will issue an updated NOA*

* In order to allow OGCA to revise the budget upon receipt of agency approval, a budget should accompany the letter request.
### COMPUTING DEVICES (UNDER $5,000 UNIT COST)

**Applicable UG Sections:**
- 200.33
- 200.48
- 200.89
- 200.439
- 200.453C

**Computing devices can be included on competitive and non-competitive proposal budgets.**

Computing devices under $5,000/unit may be direct charged to the project or activity under the following circumstances:

- The machines are essential* and allocable to the project in that they are necessary to acquire, store, analyze, process, and publish data and other information electronically, including accessories (or “peripherals”) for printing, transmitting and receiving, or storing electronic information.
- The project does not have reasonable access to other devices or equipment that can achieve the same purpose; devices may not be purchased for reasons of convenience or preference.
- Items costing more than $5,000 per unit are considered equipment and follow federal equipment rules for when they can be direct charged. (SEE 200.33, 200.48, 200.89, 200.439)

* PIs are responsible for determining whether or not the device is “essential” and to what extent the cost of the device is allocable to the sponsored project. PIs and departments should maintain documentation that describes how the proposed computing device meets the above requirements.

### PARTICIPANT SUPPORT COSTS

**Applicable UG Sections:**
- 200.75
- 200.456

**Participant support costs can be included for agency approval on competitive and non-competitive proposal budgets.**

After UG implementation, participant support costs (see 200.75) are allowable with agency prior approval. This includes stipends or subsistence allowances, travel allowances, and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with conferences or training projects. Participant support costs are not routinely allowed on research projects but can be charged if the project includes an education or outreach component and the agency approves such costs.

These costs should be explicitly listed in the proposal budget or approved by the funding agency after the award has been made.

### VISA COSTS

**Applicable UG Section:**
- 200.463D

**Short-term, travel visa costs can be included on competitive and non-competitive proposal budgets.**

Since short-term visas are issued for a specific period and purpose, they can be clearly identified as directly connected to work performed on a Federal award and can be directly charged. They must be critical and necessary (directly benefit) the project and be allowable by the agency. Typically, these visas allow employees and students to engage in field research or attend meetings in foreign locations, or allow foreign visitors to visit the University in support of the project. Long-term visa costs, such as those that enable employment at the University (for example “J” and “H1B” visas) are not allowable as direct charges.

### FIXED PRICE/RATE SUBAWARDS

**Applicable UG Section:**
- 200.332

**Agency prior approval is required to enter into fixed price/rate subawards, which may not exceed $150K.**

Agency prior approval is required to enter into a fixed price/rate subaward rather than a cost-reimbursement subaward, and the total value of each fixed price/rate subaward may not exceed $150K. This will mostly impact subawards for clinical trial site agreements, foreign subrecipients, and/or small businesses. To expedite agency approval, PIs/departments should add a new justification statement to proposals contemplating a fixed price/rate subaward. A statement is not needed for other subawards.

**AT TIME OF PROPOSAL**

- The following justification statement should be added to competitive proposals containing subawards that are anticipated to be issued as fixed price and the cumulative estimated cost of the fixed price subaward is expected to be less than $150K:
  
  “The subaward to [Name the subrecipient here] documented in this proposal meets the criteria described in SubpartC-200.201(b) and the Emory University is therefore requesting prior agency approval of this Fixed Price Subaward. The University will consider this subaward approved if an award is made and no contrary guidance from the agency is included in the award notice.”

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* Practical Tools Page 2530:19

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• General research collaborations are not likely to be issued as fixed price/rate. If you are uncertain about how to set up the subaward, consult your OSP analyst for guidance, or omit the statement – you will be able to do an after-award-issuance request if it is determined that a fixed price/rate subaward is needed.

• OSP will work with the department and PI at time of subaward issuance to determine whether a fixed price/rate or cost-reimbursement subaward is appropriate. This is true regardless of whether a fixed price/rate justification statement was included in the proposal.

• Consult with OSP if you have a situation where you would need multiple fixed price subawards to the same subrecipient to stay under the $150K threshold per subaward.
Helping Faculty Differentiate Between the Good and the Fundable

Michael Preuss and Susan Perri, Hanover Research

The ability to articulate concepts concisely, clearly, and precisely is a necessary skill when providing guidance to others. To aid research administrators in achieving this level of communication when discussing project concepts and to fill an existing gap in the literature, the authors have constructed a table which contrasts the elements of a worthy undertaking (“a good idea”) with the corresponding characteristics of an approach which might receive funding (“a fundable idea”). The descriptive clauses in Figure 2530.7-1 are intended to illustrate differences between concepts that have general merit and those that would be worth pursuing as the basis of a grant application in the humanities, social sciences, education, and for intervention, outreach, or service projects.

**Figure 2530.7-1. A Good versus Fundable Idea**

<table>
<thead>
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<tbody>
<tr>
<td>…helps someone, enables improvement</td>
<td>…addresses the funder’s target audience/group</td>
</tr>
<tr>
<td>…advances an important agenda</td>
<td>…advances the funder’s agenda and builds on the funder’s giving history or portfolio</td>
</tr>
<tr>
<td>…serves a wise/substantial purpose.</td>
<td>…serves a wise/substantial purpose while doing something innovative like answering a question or addressing a problem in a new and unique way, proving a concept, or demonstrating scalability</td>
</tr>
<tr>
<td>…aligns with personal/professional interest and experience</td>
<td>…aligns with funder priorities</td>
</tr>
<tr>
<td>…creates/maintains something of value</td>
<td>…builds or expands on something of value and has potential for impact beyond a single organization or group of people</td>
</tr>
<tr>
<td>…involves learning, growth, or progress</td>
<td>…measures/analyzes/advances learning, growth and movement toward a goal</td>
</tr>
<tr>
<td>…can have undefined steps/processes</td>
<td>…has a clear path from A to B to C and has specific, timed, measurable steps</td>
</tr>
<tr>
<td>…can be of any scale</td>
<td>…is scaled by prior experience, expertise, and to a defined cost</td>
</tr>
<tr>
<td>…can be a unique effort</td>
<td>…should be replicable and sustainable</td>
</tr>
<tr>
<td>…can be an untested concept</td>
<td>…has substantiated promise to catalyze positive change</td>
</tr>
<tr>
<td>…can be a first time endeavor</td>
<td>…should be in line with the proposer’s professional credentials and demonstrated skill-set</td>
</tr>
</tbody>
</table>

Propositions that people find appealing often include improving upon something or providing someone needed-assistance. However, enabling improvement or helping people is not enough to render a grant concept fundable (Karsh & Fox, 2009). While advancement and assistance are certainly desirable and essential elements of a proposal, one of the critical concerns of a funder is meeting the needs of the population they target (Bauer, 2009). Often, very little creativity is required to transform a good idea that advocates a helpful practice into one that also addresses the funder’s target audience. Investigating whether the proposed focus can address

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1 This article is reprinted from the *NCURA Magazine*, December 2014, Volume XLVI, No. 6. It is used with permission of the publisher.
a concern with respect to a funder’s preferred target population, such as Hispanic students, students at risk of attrition, low-income students, and students in STEM disciplines, is a helpful first step.

Grant-making organizations analyze national or regional issues and trends to identify their funding priorities (Ford, 2011) and consider the impact of their investments based on an agenda they have formulated, rather than a myriad of local contexts and interests (Bauer, 2009; Karsh & Fox, 2009). They wish to see an ever expanding set of outputs and outcomes from their portfolio that cumulatively advance the knowledge-generating, social, humanitarian, or other objectives they have established. Return-on-investment for grant makers equates to building the level of evidence for their specific grant making agenda. When formulating and refining a project concept in hopes of submission to an agency or foundation, it is prudent to consider the funding priorities expressed by and the giving history of each potential funder in an effort to delineate what types of activity each sees as advancing their agenda. It is possible that a concern considered important in one’s immediate environment may not, in fact, align with the funders’ priorities and preferences.

The authors have frequently heard that there once was a time when a wise and substantial purpose was sufficient to garner funding. If this was ever really the case, that period is long past. Among the many other requirements for a project idea to be fundable is the extension of the wise or substantial purpose construct to include innovation. Innovation, in this sense, can include unique approaches, extension of understanding, application within new contexts, extension of scope or acuity, or combining known and effective methods to increase breadth, depth, or impact.

Perhaps the most obvious pattern found among “good ideas” is that the proposed undertaking aligns with the personal or professional interests and experience of the proponent. While this is certainly an important characteristic to have in place (e.g., this is one of the purposes behind submission of biosketches), it is an inadequate basis for appealing to a sponsor. Agencies and foundations are interested in supporting people with the capability to complete projects and who have demonstrated experience or expertise but they also desire that the projects address a set of priorities they have established (Bauer, 2009; Karsh & Fox, 2009). The professional expertise and demonstrated involvement through the scholarly activity of the Principal Investigator/Project Director (PI/PD) must fall within the expressed preferences of the funder for them to add merit to the proposal.

Humanists and artists often encounter a “value” issue when seeking grants and fellowships. Their focus is on creating something that is beautiful, thought provoking, innovative, or which provides new insights. Accomplishing one or more of these purposes is, in their context, creating something of value. Yet even major funders of the arts have shifted their focus to include extended impact or community involvement emphases (NEA, 2014). As noted in the table, a general principle of a fundable project in the present context is its potential for replication and scale; its ability to build or expand on something of value; and its impact beyond a single organization or group of people.

A part of the inherent value of the areas of emphasis just noted for humanists and
artists—beauty, provocation, innovation, and insight—is their ability to facilitate or even embody learning, growth, and progress. Demonstrating these three characteristics is foundational to a grant application. However, sponsor interest in advancing an agenda through the combined outcomes of the endeavors they fund means grantees must also be able to measure the learning, growth, or progress achieved. Incorporating assessment of impact, rate of change, or degree of advancement in the project plans is necessary to fulfill this interest on the part of the sponsor.

An idea can be a “good idea” without being immediately attainable, having identified steps, or even being time bound. For example, providing all children a safe and effective educational experience, seeing that everyone in the world has reliable access to clean drinking water, and eliminating deaths from curable disease are all good ideas. Yet as just expressed, none of them are immediately attainable, include identified steps, or have time-to-completion estimates. A characteristic that sets a potentially fundable idea apart from descriptions of worthy undertakings is having a clear progression through specific, timed, and measurable steps (Bauer, 2009; Karsh & Fox, 2009). Asking questions about sequencing and intended outcomes early in the project planning will usually result in a simple but sufficient ordering of operational steps, reasonable estimations of the time required for each step, and the desired outcome or output for each part of process.

The list of good ideas in the preceding paragraph are all expressed on a national or international scale illustrating that the scope of what may be considered a good idea can be very broad. Early-career grant applicants often make project scope/scale mistakes. They see the broad potential impact of their proposal but don’t understand the sliding-scale nature of sponsored projects. Some of the things that limit the scope possible for a proposal are the prior experience of the investigator(s), the demonstrated expertise of the investigator(s), the project cost, and the funding available. These factors combine to establish a funding ladder. An investigator must have some experience and junior-faculty level expertise to request funding in the $25,000 to $75,000 range. Experience that includes prior grant funding and expertise demonstrated through publications from funded activity are necessary to approach the $100,000 to $200,000 funding range, and so on. Sponsors seek demonstrated experience and expertise as well as evidence of success at the preceding level for each step up the funding ladder.

The final three characteristics on the table are related. Concepts that have appeal can be a one-time or unique undertaking, include untested approaches, and be first time endeavors. But, each of these characteristics is a potential flaw in a grant concept. A unique endeavor, something that will done once without concern for future iterations, does not match funder interest in ability to replicate efficacious practices in other contexts or interest in extended return on investment by establishing a process that can be sustained over time. Untested approaches, unless requested or allowed by the funder, present a challenge to the effectiveness of funder investment. The funding agency intends to catalyze positive change, in an identified arena or discipline, in line with a predetermined set of priorities. Untested approaches do not offer assurance of positive change resulting or successful demonstration of an
ability to impact an identified characteristic. There is simply no objectively demonstrable evidence of potential for success. While proof-of-concept funding is available from some organizations, even these proposals should be based, at a minimum, on pilot study data. The experience level of the PI/PD is an important concern in respect to the scale of the project. It is also an important concern in respect to the appropriateness of the proposal. While faculty and staff have many skills and abilities outside those demonstrable through academic credentials, it is the academic credentials and demonstrated skill set (e.g., prior grant leadership experience, experience supervising postdoc researchers, experience leading a project/research team) that marks a request as an appropriate submission from a PI/PD, shows a team member’s ability to contribute to the project, or designates a subcontractor as being an appropriate provider of project support or services.

This advice is based on several decades of experience with grants and a familiarity with the literature of research administration. It is offered here as a potential tool for use with institutional faculty and staff when discussions of the difference between a “good idea” and a “fundable idea” arise.

References

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Michael Preuss, Ed. D., is a grants consultant/thought leader for Hanover Research who works with institutions of higher education and healthcare organizations across the United States. He is broadly experienced in research administration and proposal development, is a member of NCURA, SRA, NORDP, and NGMA and serves as an external evaluator. He can be reached at mpreuss@hanoverresearch.com

Susan Perri, MPA is a grants consultant for Hanover Research specializing in education and health care funding. Susan has served on grant review panels for the U.S. Departments of Education and Health & Human Services. She is a member of the Grant Professionals Association (GPA) and is Acquisitions Manager for its peer-reviewed Journal. She can be reached at sperri@hanoverresearch.com.
### NSF Automated Proposal Compliance Checks

Automated Proposal Compliance Checks Performed by System as of July 25, 2016

- **✓** = The system runs a compliance check and an Error or Warning message will be displayed (as noted in the “Error/Warning” column) if the proposal fails the compliance check.
- **BLANK** = The system does not run a compliance check.
- **≠** N/A = The system does not run a compliance check because the proposal rule doesn’t apply for this funding mechanism.

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<td>17. Budget Justification page count for each Subrecipient Organization that exists cannot exceed 3 pages.</td>
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<td>24. If Senior Personnel or Other Personnel funds requested exist on the Primary Budget, there should not be any blank values in the Primary budget senior or other personnel months fields (calendar, academic, or summer).</td>
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<td>25. If Senior Personnel or Other Personnel funds requested exist on a Subrecipient Budget, there should not be any blank values in the corresponding Subrecipient budget senior or other personnel months fields (calendar, academic, or summer).</td>
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<td>28. If the Primary budget or any Subrecipient Budget contains an amount in foreign travel line (E2), then the International Activities Country Name(s) checkbox should be checked on the Remainder of the Cover Sheet.</td>
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Other Checks

| 29. The “International Cooperative Activities Country Name” checkbox was checked on the Cover Sheet but no Country Names were entered. | GPG Program Description Program Announcement | ERROR | ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ |
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| 30. Country Names for “International Cooperative Activities Country” were entered on the Cover Sheet but the checkbox for “International Cooperative Activities Country Name” was not checked. | GPG Program Description Program Announcement | ERROR | ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ |
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<p>| 31. The “Vertebrate Animals” checkbox was checked on the Cover Sheet but no Institutional Animal Care and Use Committee (IACUC) Approval date was entered. Either the IACUC Approval date or the text “Planned” must be entered. If a proposer enters a date for the IACUC Approval date, then they must also enter the Vertebrate Welfare Assurance Number. | GPG Program Description Program Announcement | ERROR | ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ ☑️ |
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<th>Funding Opportunity</th>
<th>Error / Warning</th>
<th>Funding Mechanism Type</th>
</tr>
</thead>
</table>
| 32. The “Human Subjects” checkbox was checked on the Cover Sheet but no Institutional Review Board (IRB) Approval Date was entered and no Exemption Subsection was entered. Either the IRB Approval date, the exemption number(s) or the text “Pending” must be entered. | GPG Program Description Program Announcement | ERROR           | Research   
  Rapid   
  Eager   
  Idea Lab  
  Conference  
  Equipment  
  International Travel  
  Facility/center  
  Fellowship |
| 33. The International Activities Country Name checkbox should be checked on the Remainder of the Cover Sheet if the Primary Place of Performance on the Cover Sheet is outside the U.S. (excludes U.S. Possessions). | GPG Program Description Program Announcement | WARNING         | Research   
  Rapid   
  Eager   
  Idea Lab  
  Conference  
  Equipment  
  International Travel  
  Facility/center  
  Fellowship |
|                                                                                  | Program Solicitation                      | NONE            | Research   
  Rapid   
  Eager   
  Idea Lab  
  Conference  
  Equipment  
  International Travel  
  Facility/center  
  Fellowship |

Notes:
* List provides current checks performed by system as of the July 2016 Release.
Not all NSF policy requirements are currently enforced by automated compliance checks.
Cases which currently do not trigger an Error or Warning may do so in the future as additional automated compliance checks are added to FastLane.
Some checks are not enforced for separately submitted Collaborative Non-Lead Proposals as stated by NSF Policy requirements.
Checks are not enforced for Preliminary Proposals (with the exception of 33 and 34), Award Supplements and Letter of Intent submissions. Compliance checks are triggered when users “Check” the proposal, “Allow SRO access” or “Submit” to NSF.

Error - Checks triggering an error will result in a hard stop and prohibit proposal submission to NSF.

Warning - Checks triggering a warning will allow proposal submission to NSF.
Statistics and Survey Results

This section includes statistics and survey results from reputable sources for sponsored research administrators relating to pre-award services.

Trends in NIH and NSF Proposal Success Rates

AIS editors

Sometimes referred to as “success rate” or “proposal funding rate,” the rate for a given period is generally derived by dividing the number of awards by the number of proposal submissions. Success rates usually are calculated by federal sponsors on a fiscal year (FY) basis. If your principal investigators (PIs) complain to you that they seem to be working harder and failing more in terms of getting awards, it’s not their imagination. Success rates for both NIH and NSF awards have been trending downward in recent years.

Proposal Submissions and Success Rates at NIH

NIH calculates success rates “by dividing the number of applications selected for award by the total number of applications reviewed (note that if an application is unfunded on the first try and an amended application is received in the same fiscal year it is only counted once).” Generally, NIH uses success rates in reference to research grants, research project grants (RPGs) or specific types of grants (like R01s) considered for funding in a particular fiscal year. A number of factors drive the success rate of grant applications. One of the forces behind the lower success rates of NIH applications is the relatively flat budgets experienced by NIH in recent years. A related factor is the relative portion of the federal budget that is available for discretionary spending. (See ¶120.1 for a discussion of discretionary spending.)

Concomitant with the budget factor has been the expansion in the capacity of research institutions and growth in the number of research faculty nationwide. According to one NIH estimate, there were as many applicants in the three-year period 2003–2005 (about 5,200) as there were in the five-year period 1999–2003 (about 5,330). Beginning in 2002, when the number of applications was less than 60,000, the number of applications submitted began to increase dramatically, transcending the historical growth rate, according to NIH.

Thus success rates are highly dependent on the number of applications that are submitted to NIH for review, and may fall significantly in years in which the number of applications increases even if the funds available to fund grants does not. NIH regularly publishes success rate data in a variety of forms. (See historical information on success rates at NIH’s Reports, Data and Analyses Web Site, http://report.nih.gov.) Several slices of trend data on overall success rates for applications for NIH competitive awards are included at Figures 2560.1-1 through 2560.1-7.
Paylines, Percentiles and Success Rates

I have read or heard much about the dilemma of NIH applicants as they struggle to understand their chances of receiving NIH funding. As budgets flatten and tighten, this discussion has heated up. To declare that NIH success rates have hovered around 20% for the past five years does little to calm the storm of concern when we hear about shrinking percentiles and paylines. So how is it possible to have a success rate of 20% but a payline at the 7th percentile? Let’s take a few moments to sort out what these things mean and think about how these numbers are derived and how they can differ.

Impact Score

It all starts with the impact. This score is assigned by reviewers to indicate the scientific and technical merit of an application. Impact scores range between 1 and 9. A score of “1” indicates an exceptionally strong application and “9” indicates an application with substantial weakness. (I always wondered why at NIH low = good and high = bad but that predates me!) In assigning an impact score, reviewers consider each of five scored criteria: significance, investigator, innovation, approach, and environment, along with other factors like protection of human subjects and vertebrate animal care and welfare. (Read more about scoring at http://grants.nih.gov/grants/peer_review_process.htm#scoring2.)

Scoring

The following guidance has been given to reviewers to determine individual review criterion and overall impact/priority scores:

<table>
<thead>
<tr>
<th>Impact</th>
<th>Score</th>
<th>Descriptor</th>
<th>Additional Guidance on Strengths/Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>1</td>
<td>Exceptional</td>
<td>Exceptionally strong with essentially no weaknesses</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Outstanding</td>
<td>Extremely strong with negligible weaknesses</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Excellent</td>
<td>Very strong with only some minor weaknesses</td>
</tr>
<tr>
<td>Medium</td>
<td>4</td>
<td>Very Good</td>
<td>Strong but with numerous minor weaknesses</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Good</td>
<td>Strong but with at least one moderate weakness</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Satisfactory</td>
<td>Some strengths but also some moderate weaknesses</td>
</tr>
<tr>
<td>Low</td>
<td>7</td>
<td>Fair</td>
<td>Some strengths but with at least one major weakness</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Marginal</td>
<td>A few strengths and a few major weaknesses</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Poor</td>
<td>Very few strengths and numerous major weaknesses</td>
</tr>
</tbody>
</table>

Non-numeric score options: NR = Not Recommended for Further Consideration, DF = Deferred, AB = Abstention, CF = Conflict, NP = Not Present, ND = Not Discussed
Minor Weakness: An easily addressable weakness that does not substantially lessen impact
Moderate Weakness: A weakness that lessens impact
Major Weakness: A weakness that severely limits impact
(Source: http://grants.nih.gov/grants/peer_review_process.htm#scoring2.)

Percentile Rank

The percentile rank is based on a ranking of the impact scores assigned by a peer review committee. The percentile rank is normally calculated by ordering the impact score of a particular application against the impact scores of all applications reviewed in the current and the preceding two review rounds. An application that was ranked in the 5th percentile is considered more meritorious than 95% of the applications reviewed by that committee. This kind of ranking permits comparison across committees that may have different scoring behaviors. It is important to note that not all research project grant applications (RPGs) are percentiled. For example, applications submitted in response to a request

1 Source: Posted in “Rock Talk” (a blog) on February 15, 2011, by Sally Rockey, director of the NIH Office of Extramural Research.
Percentiles

- A percentile is the approximate percentage of applications that received a better overall impact/priority score from the study section during the past year.
- All percentiles are reported as whole numbers.
- Only a subset of all applications receive percentiles. Which types of applications are percentiled varies across different NIH Institutes and Centers.
- The summary statement will identify the base that was used to determine the percentile.

Read more about percentiles at http://grants.nih.gov/grants/peer_review_process.htm#Summary.

Payline

Many NIH institutes calculate a percentile rank up to which nearly all R01 applications can be funded. For grant applications that do not receive percentile ranks, the payline may be expressed as an impact score. Institutes that choose to publish paylines in advance calculate the payline based on expectations about the availability of funds, application loads, and the average cost of RPGs during the current fiscal year. Other institutes prefer to describe the process for selecting applications for funding and then report on the number of applications funded within different percentile ranges at the end of the fiscal year. Because the NIH is currently operating on a continuing resolution and funding levels for the remainder of this fiscal year are uncertain, most of the NIH institutes have offered less detail this year than in the past.

But remember, even when an IC establishes a payline, applications outside of the payline can be paid under justified circumstances if these applications are a high priority for the particular institute or center. When these select-pay/out-of-order/priority pay/high priority relevance selections are made, it may result that other applications within in the payline are not paid because funds are no longer available to support them.

Success Rates

The success rate calculation is always carried out after the close of the fiscal year, and it is based on the number of applications funded divided by the number of applications reviewed and expressed as a percent. To better reflect the funding of unique research applications, the number of applications is adjusted by removing revisions and correcting for projects where the resubmission (A1) is submitted in the same year as the original application (A0).
The Answer

Now we are equipped to answer our earlier question. How is it possible to have a success rate of 20% but a payline at the 7th percentile? There are several real-life reasons why paylines (the ones that use percentiles) can be either higher or lower than success rates:

- Applications that are not percentiled are still factored into the success rate calculation. Thus, funding a number of awards that are not assigned percentiles will increase the success rate without changing the payline.

- The success rate for a particular fiscal year is a reflection of the funded applications and can include applications reviewed in the previous fiscal year; whereas, the payline encompasses only applications reviewed in that fiscal year. So awarding applications that were reviewed in the previous year will also increase the success rate.

- The average quality of the applications assigned to an institute will also affect its payline. If an institute happens to receive a set of applications with very good (low) percentile scores, its success rate will be higher than its payline, all else being equal. For example, in fiscal year 2010, the National Institute of General Medical Sciences R01 success rate was about 27% but the midpoint of the funding curve occurred close to the 21st percentile.


Whew, you made it through. The difference between paylines, percentiles and success rates remains a confusing topic because of the compounding factors that rule out a simple linear relationship. You need to consider all the factors when assessing the potential for an individual application to be funded. Your best advisor on this issue, because of the differences in the ICs and programs, is your NIH program official. Give him or her call.
Figure 2560.1-1: Research Project Success Rates by Activity, 2000–2009

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th># of Applications Reviewed</th>
<th># of Applications Awarded</th>
<th>Amount Awarded</th>
<th>Success Rate</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>All new</td>
<td>36,160</td>
<td>6,258</td>
<td>$2,392,619,107</td>
<td>17.3%</td>
<td>2009</td>
</tr>
<tr>
<td>All supplement</td>
<td>122</td>
<td>31</td>
<td>$6,980,468</td>
<td>25.4%</td>
<td>2009</td>
</tr>
<tr>
<td>All renewal</td>
<td>6,860</td>
<td>2,592</td>
<td>$1,312,819,785</td>
<td>37.8%</td>
<td>2009</td>
</tr>
<tr>
<td>FY Total</td>
<td>43,142</td>
<td>8,881</td>
<td>$3,712,419,360</td>
<td>20.6%</td>
<td>2009</td>
</tr>
<tr>
<td>All new</td>
<td>36,304</td>
<td>6,772</td>
<td>$2,334,046,939</td>
<td>18.7%</td>
<td>2008</td>
</tr>
<tr>
<td>All supplement</td>
<td>124</td>
<td>50</td>
<td>$7,237,868</td>
<td>40.3%</td>
<td>2008</td>
</tr>
<tr>
<td>All renewal</td>
<td>7,039</td>
<td>2,638</td>
<td>$1,247,034,957</td>
<td>37.5%</td>
<td>2008</td>
</tr>
<tr>
<td>FY Total</td>
<td>43,467</td>
<td>9,460</td>
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<tr>
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<td>7,320</td>
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<td>2007</td>
</tr>
<tr>
<td>All supplement</td>
<td>181</td>
<td>61</td>
<td>$10,044,708</td>
<td>33.7%</td>
<td>2007</td>
</tr>
<tr>
<td>All renewal</td>
<td>7,018</td>
<td>2,719</td>
<td>$1,201,327,079</td>
<td>38.7%</td>
<td>2007</td>
</tr>
<tr>
<td>FY Total</td>
<td>47,455</td>
<td>10,100</td>
<td>$3,718,570,248</td>
<td>21.3%</td>
<td>2007</td>
</tr>
<tr>
<td>All new</td>
<td>38,220</td>
<td>6,390</td>
<td>$2,173,240,446</td>
<td>16.7%</td>
<td>2006</td>
</tr>
<tr>
<td>All supplement</td>
<td>148</td>
<td>44</td>
<td>$11,124,768</td>
<td>29.7%</td>
<td>2006</td>
</tr>
<tr>
<td>All renewal</td>
<td>7,320</td>
<td>2,694</td>
<td>$1,173,973,388</td>
<td>36.8%</td>
<td>2006</td>
</tr>
<tr>
<td>FY Total</td>
<td>45,688</td>
<td>9,128</td>
<td>$3,358,338,602</td>
<td>20%</td>
<td>2006</td>
</tr>
<tr>
<td>All new</td>
<td>38,220</td>
<td>6,390</td>
<td>$2,173,240,446</td>
<td>16.7%</td>
<td>2006</td>
</tr>
<tr>
<td>All supplement</td>
<td>148</td>
<td>44</td>
<td>$11,124,768</td>
<td>29.7%</td>
<td>2006</td>
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<tr>
<td>All renewal</td>
<td>7,320</td>
<td>2,694</td>
<td>$1,173,973,388</td>
<td>36.8%</td>
<td>2006</td>
</tr>
<tr>
<td>FY Total</td>
<td>45,688</td>
<td>9,128</td>
<td>$3,358,338,602</td>
<td>20%</td>
<td>2006</td>
</tr>
<tr>
<td>All new</td>
<td>35,874</td>
<td>6,739</td>
<td>$2,178,025,344</td>
<td>18.8%</td>
<td>2005</td>
</tr>
<tr>
<td>All supplement</td>
<td>170</td>
<td>51</td>
<td>$9,667,796</td>
<td>30%</td>
<td>2005</td>
</tr>
<tr>
<td>All renewal</td>
<td>7,025</td>
<td>2,809</td>
<td>$1,217,582,099</td>
<td>40%</td>
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</tr>
<tr>
<td>FY Total</td>
<td>43,069</td>
<td>9,599</td>
<td>$3,405,275,239</td>
<td>22.3%</td>
<td>2005</td>
</tr>
<tr>
<td>All new</td>
<td>34,044</td>
<td>7,025</td>
<td>$2,309,205,329</td>
<td>20.6%</td>
<td>2004</td>
</tr>
<tr>
<td>All supplement</td>
<td>234</td>
<td>76</td>
<td>$11,554,800</td>
<td>32.5%</td>
<td>2004</td>
</tr>
<tr>
<td>All renewal</td>
<td>6,583</td>
<td>2,951</td>
<td>$1,255,754,903</td>
<td>44.8%</td>
<td>2004</td>
</tr>
<tr>
<td>FY Total</td>
<td>40,861</td>
<td>10,052</td>
<td>$3,576,515,032</td>
<td>24.6%</td>
<td>2004</td>
</tr>
<tr>
<td>All new</td>
<td>28,355</td>
<td>7,183</td>
<td>$2,223,712,149</td>
<td>25.3%</td>
<td>2003</td>
</tr>
<tr>
<td>All supplement</td>
<td>169</td>
<td>77</td>
<td>$13,081,668</td>
<td>45.6%</td>
<td>2003</td>
</tr>
<tr>
<td>All renewal</td>
<td>6,186</td>
<td>3,133</td>
<td>$1,275,901,699</td>
<td>50.6%</td>
<td>2003</td>
</tr>
<tr>
<td>FY Total</td>
<td>34,710</td>
<td>10,393</td>
<td>$3,512,695,516</td>
<td>29.9%</td>
<td>2003</td>
</tr>
<tr>
<td>All new</td>
<td>24,403</td>
<td>6,505</td>
<td>$1,983,710,091</td>
<td>26.7%</td>
<td>2002</td>
</tr>
<tr>
<td>All supplement</td>
<td>162</td>
<td>66</td>
<td>$14,210,935</td>
<td>40.7%</td>
<td>2002</td>
</tr>
<tr>
<td>All renewal</td>
<td>5,503</td>
<td>2,825</td>
<td>$1,185,159,147</td>
<td>51.3%</td>
<td>2002</td>
</tr>
<tr>
<td>FY Total</td>
<td>30,068</td>
<td>9,396</td>
<td>$3,183,080,173</td>
<td>31.2%</td>
<td>2002</td>
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<tr>
<td>All new</td>
<td>22,854</td>
<td>6,191</td>
<td>$1,927,342,772</td>
<td>27.1%</td>
<td>2001</td>
</tr>
<tr>
<td>All supplement</td>
<td>188</td>
<td>88</td>
<td>$18,653,368</td>
<td>46.8%</td>
<td>2001</td>
</tr>
<tr>
<td>All renewal</td>
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<td>2,819</td>
<td>$1,083,006,115</td>
<td>52.9%</td>
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<td>FY Total</td>
<td>28,368</td>
<td>9,098</td>
<td>$3,029,002,255</td>
<td>32.1%</td>
<td>2001</td>
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</table>

continued
Figure 2560.1-1, continued

<table>
<thead>
<tr>
<th>Type of Activity</th>
<th># of Applications Reviewed</th>
<th># of Applications Awarded</th>
<th>Amount Awarded</th>
<th>Success Rate</th>
<th>Fiscal Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>All new</td>
<td>22,192</td>
<td>5,824</td>
<td>$1,759,228,959</td>
<td>26.2%</td>
<td>2000</td>
</tr>
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<td>All supplement</td>
<td>127</td>
<td>54</td>
<td>$8,926,201</td>
<td>42.5%</td>
<td>2000</td>
</tr>
<tr>
<td>All renewal</td>
<td>5,479</td>
<td>2,887</td>
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<td>52.7%</td>
<td>2000</td>
</tr>
<tr>
<td>FY Total</td>
<td>27,798</td>
<td>8,765</td>
<td>$2,911,898,979</td>
<td>31.5%</td>
<td>2000</td>
</tr>
</tbody>
</table>


Figure 2560.1-2: NIH: Trend in Success Rate of Research Project Grant Applications, FYs 1995–2011

Figure 2560.1-3: NIH: Research Project Grants, Competing Applications And Awards, FYs 1997–2011

Figure 2560.1-4: NIH: Research Project Grants, Average Size, FYs 1999–2011

Figure 2560.1-5: NIH: # of Research Project Grants as a Percent of All Research Grants Funding, FYs 1998–2011

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>Experienced Investigators</th>
<th>New Investigators</th>
<th>New as a Percent</th>
<th>Total Investigators</th>
</tr>
</thead>
<tbody>
<tr>
<td>1989</td>
<td>3,604</td>
<td>1,564</td>
<td>30.3%</td>
<td>5,168</td>
</tr>
<tr>
<td>1990</td>
<td>3,207</td>
<td>1,336</td>
<td>29.4%</td>
<td>4,543</td>
</tr>
<tr>
<td>1991</td>
<td>3,725</td>
<td>1,506</td>
<td>28.8%</td>
<td>5,231</td>
</tr>
<tr>
<td>1992</td>
<td>3,984</td>
<td>1,468</td>
<td>26.9%</td>
<td>5,452</td>
</tr>
<tr>
<td>1993</td>
<td>3,450</td>
<td>1,261</td>
<td>26.8%</td>
<td>4,711</td>
</tr>
<tr>
<td>1994</td>
<td>3,915</td>
<td>1,445</td>
<td>27.0%</td>
<td>5,360</td>
</tr>
<tr>
<td>1995</td>
<td>4,166</td>
<td>1,421</td>
<td>25.4%</td>
<td>5,587</td>
</tr>
<tr>
<td>1996</td>
<td>4,094</td>
<td>1,364</td>
<td>25.0%</td>
<td>5,458</td>
</tr>
<tr>
<td>1997</td>
<td>4,403</td>
<td>1,483</td>
<td>25.2%</td>
<td>5,886</td>
</tr>
<tr>
<td>1998</td>
<td>4,387</td>
<td>1,518</td>
<td>25.7%</td>
<td>5,905</td>
</tr>
<tr>
<td>1999</td>
<td>5,050</td>
<td>1,574</td>
<td>23.8%</td>
<td>6,624</td>
</tr>
<tr>
<td>2000</td>
<td>4,982</td>
<td>1,612</td>
<td>24.4%</td>
<td>6,594</td>
</tr>
<tr>
<td>2001</td>
<td>4,967</td>
<td>1,588</td>
<td>24.2%</td>
<td>6,555</td>
</tr>
<tr>
<td>2002</td>
<td>4,803</td>
<td>1,586</td>
<td>24.8%</td>
<td>6,389</td>
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<tr>
<td>2003</td>
<td>5,228</td>
<td>1,695</td>
<td>24.5%</td>
<td>6,923</td>
</tr>
<tr>
<td>2004</td>
<td>4,988</td>
<td>1,539</td>
<td>23.6%</td>
<td>6,527</td>
</tr>
<tr>
<td>2005</td>
<td>4,611</td>
<td>1,461</td>
<td>24.1%</td>
<td>6,072</td>
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<tr>
<td>2006</td>
<td>4,342</td>
<td>1,362</td>
<td>23.9%</td>
<td>5,704</td>
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<tr>
<td>2007</td>
<td>4,489</td>
<td>1,596</td>
<td>26.2%</td>
<td>6,085</td>
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<tr>
<td>2008</td>
<td>4,411</td>
<td>1,684</td>
<td>27.6%</td>
<td>6,095</td>
</tr>
<tr>
<td>2009</td>
<td>4,295</td>
<td>1,800</td>
<td>29.5%</td>
<td>6,095</td>
</tr>
<tr>
<td>2010</td>
<td>4,476</td>
<td>2,097</td>
<td>31.9%</td>
<td>6,573</td>
</tr>
<tr>
<td>2011</td>
<td>4,113</td>
<td>1,776</td>
<td>30.2%</td>
<td>5,889</td>
</tr>
</tbody>
</table>
Figure 2560.1-6(b): NIH: # of New and Experienced PIs on Competing R01 Equivalent Awards

<table>
<thead>
<tr>
<th>NIH Institute or Center</th>
<th>New Investigator Achievements</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Without ARRA</td>
<td>With ARRA</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of New Investigators</td>
<td>Number of New Investigators</td>
<td></td>
</tr>
<tr>
<td>Common Fund</td>
<td>67</td>
<td>77</td>
<td></td>
</tr>
<tr>
<td>NIMH</td>
<td>142</td>
<td>157</td>
<td></td>
</tr>
<tr>
<td>NIAID</td>
<td>187</td>
<td>191</td>
<td></td>
</tr>
<tr>
<td>NICHD</td>
<td>98</td>
<td>128</td>
<td></td>
</tr>
<tr>
<td>NINR</td>
<td>30</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>NIGMS</td>
<td>179</td>
<td>203</td>
<td></td>
</tr>
<tr>
<td>NCMHD</td>
<td>10</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>NHLBI</td>
<td>212</td>
<td>273</td>
<td></td>
</tr>
<tr>
<td>NIA</td>
<td>82</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>NHGRI</td>
<td>21</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>NCCAM</td>
<td>12</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>NINDS</td>
<td>133</td>
<td>139</td>
<td></td>
</tr>
<tr>
<td>NEI</td>
<td>47</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>NIAAA</td>
<td>35</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>NLM</td>
<td>9</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>NIBIB</td>
<td>32</td>
<td>42</td>
<td></td>
</tr>
<tr>
<td>OD</td>
<td>2</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>NIAMS</td>
<td>47</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>FIC</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>NCRR</td>
<td>1</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>NIDDK</td>
<td>127</td>
<td>140</td>
<td></td>
</tr>
<tr>
<td>NIDCD</td>
<td>31</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>NIEHS</td>
<td>23</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>NIDCR</td>
<td>25</td>
<td>27</td>
<td></td>
</tr>
<tr>
<td>NIDA</td>
<td>67</td>
<td>88</td>
<td></td>
</tr>
<tr>
<td>NCI</td>
<td>210</td>
<td>260</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,800</strong></td>
<td><strong>2,104</strong></td>
<td></td>
</tr>
</tbody>
</table>

Proposal Submissions and Success Rates at NSF

NSF receives approximately 40,000 proposals each year for research, education, and training projects, of which approximately 11,000 are funded. In addition, NSF receives several thousand applications for graduate and postdoctoral fellowships.

According to NSF, it is “the only federal agency dedicated to advancing research and education in science and engineering across all fields and disciplines and at all educational levels.” Further, in many fields, “including computer science, mathematics, and the social sciences, NSF is the principal source of federal support.”

NSF provides several ways to research past and current awards including by searching the Award Abstracts database at www.nsf.gov/awardsearch. Data in the statistics area of the NSF site (www.nsf.gov/statistics) help put U.S. investment in research and education through NSF programs in a national and international perspective.

The Impact of Proposal and Award Management Mechanisms (IPAMM) working group was created in 2006 to address best practices to achieve a greater success rate in NSF awards (www.nsf.gov/news/newsmedia/IPAMM_Report_Final.pdf). Significant findings from the group’s final report released in August 2007 include the following:

◆ Research proposal funding rates decreased as NSF budget, average award size, and proposal submission rates increased

◆ PI success rates (percentage of PIs that are funded) decreased as the number of PIs submitting to NSF increased
**NSF by the Numbers**

In “FY 2011 Performance and Financial Highlights,” NSF provides the following snapshot of its 2011 activities:

- Appropriations (does not include special or donated funds): $6.9 billion
- Colleges, universities, and others receiving NSF funding: 1,875 (77% of support went to colleges, universities and academic consortia)
- Proposals evaluated through competitive merit review: 51,600
- Awards funded: 11,200 (90% thru competitive merit review)
- Proposal reviews conducted: 262,000
- Estimated # of people NSF supports directly (researchers, postdoc fellows, trainees, teachers, students): 276,000
- Students supported by NSF Graduate Research Fellowships since 1952: 44,000


◆ Number of proposals submitted per PI to gain one award increased
◆ Directorate level trends show significant variability in rate of change, degree of change, and starting and end points of change
◆ Proportion of highly rated proposals has not declined; however, the funding rate of highly rated proposals has decreased
◆ The decrease in funding rate has not had a disproportionate effect on women, minorities, beginning PIs, or PIs at particular types of institutions

Additional findings include

◆ NSF proposal funding rates declined due to a surge in proposal submissions at the same time NSF was making a concerted effort to increase the average award size. Increases in the overall NSF budget were absorbed by the growth in the average award size, such that the annual number of awards made stayed relatively constant. As a result, funding rates dropped significantly between FY 2000 and FY 2004, leveling off in FY 2005 and FY 2006.
◆ The increase in proposal submissions can be attributed both to an increased applicant pool and to an increased number of proposals per applicant. The expansion of the applicant pool is due in part to an increase in the size and capacity of the research community, loss of funding from other sources, and the increased use by NSF of targeted solicitations in new areas. External institutional pressures, combined with the decreased funding rate, contributed to the growth in the number of proposals submitted per proposer.

Some summary data on NSF proposal and award activity are included at Figures 2560.1-9 through Figure 2560.1-11.
### Figure 2560.1-9: NSF: Funding Rate and Award Size Trends, FYs 2002-2011

<table>
<thead>
<tr>
<th>FY</th>
<th>Number of Proposals</th>
<th>Number of Awards</th>
<th>Funding Rate</th>
<th>Average Decision Time (months)</th>
<th>Mean Award Duration (years)</th>
<th>Median Annual Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>51,552</td>
<td>11,186</td>
<td>22%</td>
<td>5.59</td>
<td>2.57</td>
<td>$107,768</td>
</tr>
<tr>
<td>2010</td>
<td>55,558</td>
<td>13,014</td>
<td>23%</td>
<td>5.58</td>
<td>2.62</td>
<td>$107,994</td>
</tr>
<tr>
<td>2009</td>
<td>45,215</td>
<td>14,642</td>
<td>32%</td>
<td>6.02</td>
<td>2.90</td>
<td>$100,000</td>
</tr>
<tr>
<td>2008</td>
<td>43,907</td>
<td>11,024</td>
<td>25%</td>
<td>5.65</td>
<td>3.10</td>
<td>$82,095</td>
</tr>
<tr>
<td>2007</td>
<td>44,104</td>
<td>11,352</td>
<td>26%</td>
<td>5.57</td>
<td>3.21</td>
<td>$80,216</td>
</tr>
<tr>
<td>2006</td>
<td>42,049</td>
<td>10,317</td>
<td>25%</td>
<td>5.52</td>
<td>3.26</td>
<td>$75,632</td>
</tr>
<tr>
<td>2005</td>
<td>41,597</td>
<td>9,757</td>
<td>23%</td>
<td>5.52</td>
<td>3.33</td>
<td>$73,002</td>
</tr>
<tr>
<td>2004</td>
<td>43,488</td>
<td>10,254</td>
<td>24%</td>
<td>5.43</td>
<td>3.32</td>
<td>$72,649</td>
</tr>
<tr>
<td>2003</td>
<td>39,745</td>
<td>10,721</td>
<td>27%</td>
<td>5.31</td>
<td>3.28</td>
<td>$75,000</td>
</tr>
<tr>
<td>2002</td>
<td>34,811</td>
<td>10,230</td>
<td>29%</td>
<td>5.65</td>
<td>3.32</td>
<td>$62,607</td>
</tr>
</tbody>
</table>


### Figure 2560.1-10: Institutions Funded by NSF FY 2011 Budget Obligations - $6,595 million

- Federally Funded R&D Centers $305 million (5%)
- Other $385 million (6%)
- Private industry Inc. small business $815 million (12%)
- Colleges, Universities and Academic Consortia $5,090 million (74%)

Figure 2560.1-11: NSF: Average # of Research Proposals Submitted per PI to NSF Before Receiving an Award

Figure legend: The average number of research proposals submitted in a three-year period before one award was received was calculated for all successful PIs. Source: NSF Budget Division

2590  Knowledge Check

AIS editors

The Q&As at §2590.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 2500 has been understood. Note: For the answer key for §2590.1, see §2590.3, which appears on a separate page (page 2590:5) for testing purposes.

Discussion topics at §2590.2 are designed to engender dialogue among staff on general issues of importance in the field.

2590.1  Q&As

1. Functions often performed by pre-award staff typically include all of the following EXCEPT:

(a) Proposal development
(b) Proposal review and approval
(c) Application submission
(d) Audit oversight

2. The consensus among higher education institutions is that pre-award services are best performed by

(a) A central pre-award office
(b) An office that performs cradle-to-grave (pre-award and post-award) grants services
(c) An office that performs pre-award services exclusively for grants from a particular agency
(c) None of the above

3. A pre-award office typically is responsible for

(a) Tracking and reporting submissions and awards
(b) Tracking and reporting audit documents
(c) Tracking and reporting performance reports
(d) Tracking and reporting closeout documents

4. If a pre-award office offers proposal review services, they typically include all of the following services EXCEPT:

(a) Review of its overall quality and completeness
(b) Consideration of the quality of its science
(c) Check on its compliance with university and sponsor policies and regulations
(d) Consideration of its fiscal requirements

5. There are typically three major components to negotiate in an award, including all of the following EXCEPT:
(a) Scope of the research
(b) Terms and conditions
(c) The principal investigator
(d) Budget

6. As discussed in ¶2505, a Budget Specialist typically performs the following services EXCEPT:
(a) Assists faculty in developing proposal budgets
(b) Maintains current knowledge of institutional and sponsor allowable costs
(c) Assists faculty with indirect cost calculations and fringe benefit rates
(d) Assists faculty with proposal editing

7. As discussed in ¶2505, an Information Specialist typically performs the following services EXCEPT:
(a) Maintains current knowledge of sponsor programs, priorities, and funding trends
(b) Assists in the preparation of subawards
(c) Assists faculty in accessing and using automated funding databases
(d) Conducts funding searches for faculty

8. Perhaps the element most essential to success in pre-award offices is a/an
(a) Attitude of service
(b) Large budget
(c) Staff with accounting backgrounds
(d) Effective grant opportunities tracking system


**Discussion Topics**

1. Discuss the concept of internal competition for funding. What is the proper role for the sponsored research office in such situations?

2. Your pre-award office is collecting an array of data. Are you making the best use of this information? For example: With whom are you sharing this data? Is it being presented to each recipient of the data in a format that is most useful to each specific individual? Are there ways of “mining” the data for trends or other information that could prove useful to your institution?

3. Are you doing all you can do to identify and provide to interested faculty — on an ongoing basis — information about nonfederal sponsored funding?

4. What type of performance measures are in place for evaluating pre-award staff? In your opinion, are these effective determinants of performance?

5. A recent Government Accountability Office report (GAO-06-1046) discussed performance accountability measures relating to grants management. According to GAO, “Collectively, five key strategies appear to facilitate the effective design and implementation of performance accountability mechanisms.” They are as follows:

   1. Ensure mechanisms are of sufficient value to motivate desired behaviors,
   2. Periodically renegotiate and revise mechanisms and measures,
   3. Ensure appropriate measurement selection,
   4. Ensure technical capacity,
   5. Allow for phased implementation.

   In addition to these strategies, GAO said that collaboration, oversight, and feedback are also very important to the success of performance accountability mechanisms. Discuss how these techniques are or could be implemented in your office to assess and measure performance of your pre-award staff.

6. What steps, if any, does your institution use to encourage interdisciplinary research and other forms of research collaboration? What role does your office play in this process?

7. The following are sometimes included in a “checklist” for the application process. What role does your office play in the following activities?
   
   - Locating funding opportunities
   - Downloading application, instructions, forms
   - Writing the proposal
     - Defining the project
     - Preparing the research plan
     - Developing a budget
     - Identifying subawardees/subcontractors
—Securing cost share; securing IRB, IACUC, etc. review
—Addressing conflict of interest

• Obtaining necessary signoffs
• Submitting application
12590.3  **Answer Key**
Following are the correct answers to the questions included at ¶2590.1.

1. (d) Audit oversight
2. (d) None of the above
3. (a) Tracking and reporting submissions and awards
4. (b) Consideration of the quality of its science
5. (c) The principal investigator
6. (d) Assists faculty with proposal editing
7. (b) Assists in the preparation of subawards
8. (a) Attitude of service
PLACE TAB

¶ 2700
Administering Research Contracts
Chapter 2700
Administering Research Contracts

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Note: Unless otherwise indicated, material was prepared by AIS editors.
¶ 2701  Introduction
Richard Seligman, Ed.D. Associate Vice President for Research Administration
California Institute of Technology

This chapter covers topics relating to the effective administration of research contracts.

In a world dominated by grant awards, David Mayo of the California Institute of Technology provides an extremely important discussion of the differences between grants and contracts. There is a tendency for investigators to refer to an award as “my grant,” even when the award is a contract. Mayo explains why the distinction is an important one for investigators and research administrators alike to understand and appreciate. There are profound and fundamental differences between the “procurement” and “financial assistance” mechanisms. Mayo does a thorough job of pointing out such differences in both form and substance that occur throughout the life cycle of a sponsored project, from the proposal submission to the award closeout.

No discussion of federal research contracts could be complete without introducing readers to the Federal Acquisition Regulation (FAR). Mayo provides useful information on the organization, structure, and use of the FAR. This is a concise and particularly helpful description for research administrators of just how the FAR is intended to work and how best to understand and use it.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶ 2705, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at ¶ 2720), practical tools (at ¶ 2730), case studies (at ¶ 2740), and trends data and other related statistics (at ¶ 2760). A “knowledge check” containing Q&As and discussion topics is included at ¶ 2790.
Administering Research Contracts
David J. Mayo, Director of Sponsored Research, California Institute of Technology

This chapter delves into many of the issues associated with the administration of research contracts. It looks at how contracts differ from grants, from both federal and legal perspectives. It covers the structure of the primary regulation governing federal contracts, the Federal Acquisition Regulation, and how it can be used to a research administrator’s advantage when negotiating federal contracts. It looks at some of the special challenges that can arise when, for example, an office of sponsored programs (OSP) is negotiating contracts with government agencies and with the private sector, including subcontracts of federal funds via the private sector. Lastly it discusses in general terms resources required by an institution that accepts federal contracts.

What Is a ‘Contract’?

It is important to define the key terms used in a discussion of research contracts administration. The word “contract,” as with many terms in research administration, can have different meanings in different contexts. Legally a contract is an agreement between two or more persons or entities that creates a legal obligation between them to do something, or to not do something. Further, to be considered binding, a contract must have the following essential characteristics:

◆ The parties to the contract must be competent to enter into the agreement.
◆ The subject matter of the contract must be explicitly stated.
◆ There must be consideration (something of value) given to the party making the promise(s) by the party receiving the promise(s).
◆ There must be mutuality of agreement (in other words, both parties must agree on all of the terms).
◆ There must be mutuality of obligation (i.e., both parties must be obligated by the contract).

According to the criteria, above grants are legally contracts. In fact the institution could label the agreement a “gift,” a “memorandum of understanding,” or anything else, for that matter, but if it meets the legal definition of a contract, it’s a contract.

On the other hand, the federal government makes a clear distinction between grants and cooperative agreements — which are collectively known as “financial assistance awards”¹ — and contracts, which are “procurement awards.” The primary difference here is that financial assistance awards are intended to transfer something of value to the recipient to carry out a public purpose of “support or stimulation” as

¹ The distinction is so clear as to have been codified in federal statute: Federal Grant and Cooperative Agreement Act (31 USC. 6304 and 6305). The act is available online at www.gpoaccess.gov/uscode/browse.html. See also ¶2905.3.
authorized by U.S. law. Student aid, research grants, and U.S. Department of Education block grants to states are examples of federal financial assistance.

The federal government uses contracts for the purpose of acquiring goods and services for the direct benefit of or use by the U.S. government. In other words, the government has decided what it needs, and then looks for an entity that can provide that service or commodity for the best price. For purposes of this chapter, the term “contract” refers to federal procurement awards and to awards issued by the private sector.

Other terms often encountered when discussing contracts, compared side-by-side with their financial assistance counterparts, are included as Figure 1.

**Figure 1. Key Terms Used in Procurement vs. Financial Assistance Awards**

<table>
<thead>
<tr>
<th>Procurement</th>
<th>Financial Assistance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solicitation</td>
<td>Program Announcement</td>
</tr>
<tr>
<td>Request for Proposals (RFP)</td>
<td>Proposal Guidelines</td>
</tr>
<tr>
<td>Request for Quotes (RFQ)</td>
<td>Call for Proposals</td>
</tr>
<tr>
<td>Proposal</td>
<td>Broad Agency Announcement</td>
</tr>
<tr>
<td>Bid</td>
<td>Proposal Application</td>
</tr>
<tr>
<td>Offer</td>
<td>Budget</td>
</tr>
<tr>
<td>Cost Proposal</td>
<td>Project Description</td>
</tr>
<tr>
<td>Statement of Work (SOW)</td>
<td></td>
</tr>
<tr>
<td>Technical Proposal</td>
<td></td>
</tr>
<tr>
<td>Subcontract</td>
<td>Subaward</td>
</tr>
<tr>
<td>Contract</td>
<td>Grant or Cooperative Agreement</td>
</tr>
<tr>
<td>Contract Award</td>
<td>Financial Assistance Award</td>
</tr>
<tr>
<td>Representations and Certifications</td>
<td>Certifications</td>
</tr>
<tr>
<td>Federal Acquisition Regulation</td>
<td>Uniform Guidance (2 CFR 200)</td>
</tr>
<tr>
<td>Uniform Guidance (2 CFR 200)</td>
<td></td>
</tr>
</tbody>
</table>

**¶2705.2 Staffing and Communications**

There is no specific organizational model that is better or worse for the administration of contract awards. Proposals that result in contract awards have the same basic characteristics as proposals that result in grant awards: a budget, a statement of work or project description, terms and conditions, etc. Therefore it logically follows that the simplest way of handling contract awards organizationally is to use the same method as is used for grant awards.

As with many other aspects of research administration, the volume of activity in a particular area is the single most important factor in determining staffing needs. Wherever in the institution contract awards are to be reviewed and negotiated, however, that office must have available to it someone familiar with the Federal Acquisition Regulation and with the special issues that make contract awards different from grant awards. In addition if the OSP is entering into contracts with the private sector, then it will need access to expertise in intellectual property issues (including the Bayh-Dole Act and the institution’s intellectual property policies, licensing activity, and patent portfolio). (See Chapter 1900 for an in-depth discussion of data rights and intellectual property.)
Effective Communications
Communication is especially important when administering contract awards. This is primarily because most institutions receive so few contract awards, when compared with grant awards, that institutional personnel responsible for the management of awards are often unaware of the unique requirements of contract awards administration.

There are two highly important elements to communications about the contract:
◆ Those who sign off on contract proposals (if different from those who negotiate contract awards) should understand that their signatures may also represent acceptance at the time of proposal submission of any terms and conditions that are included in the contract solicitation.
◆ After execution of the award, it is vital that the contract’s requirements be communicated clearly and in detail to those responsible for the administration of a contract award.

Both of these issues are addressed in more detail below.

Resources Required
The single most important resource that an institution needs with regard to administering research contracts is actually two-fold: (1) access to a copy of the Federal Acquisition Regulation (FAR), and (2) at least one person who is familiar with its use.2 (Details on the structure of the FAR are discussed on page 2705:7.)

12705.3 Contracts at the Proposal Stage
As discussed above contract awards are just another type of award that an institution receives. The regulations governing contracts, however, are different in many respects from those that govern grants, and this is where an institution can encounter difficulty — in situations where it doesn’t account for these differences in its administration of contract awards.

Individuals on the pre-award side of research administration are familiar with various agency proposal guidelines for those sponsors to which they submit the most proposals. They are accustomed to solicited proposals, where a sponsor has requested applications for a specific program, with a specific deadline, and usually with specific formatting instructions. Further they are familiar with unsolicited proposals, where a sponsor has made it known that it is accepting applications in a general area of interest, but there is usually no deadline, and there may or may not be specific formatting instructions.

2 All financial assistance regulations are codified at Title 2 of the Code of Federal Regulations (CFR). The FAR is codified at Title 48. The CFR is available online at www.access.gpo.gov/nara/cfr/cfr-table-search.html?page1 as well as at the FAR site at http://www.acquisition.gov/far/. Note that effective December 26, 2014, the regulations that apply to financial assistance awards change from the OMB Circulars to the Uniform Guidance (2 CFR 200), as described in the Uniform Guidance; the cost principle, audit and subrecipient monitoring portions of the Uniform Guidance will apply to contract awards issued on or after 12/26/2014.
Most contracts are the result of solicited proposals, where the solicitation includes a statement of work written by the sponsor and very specific instructions as to how the proposal should be prepared and submitted. Contract solicitations often include a proposed set of terms and conditions that the sponsor intends to use if the institution is selected for an award.

While there may not appear to be much difference conceptually between a grant solicitation and a contract solicitation, there is one practical difference: if the contract solicitation includes proposed terms and conditions, it is almost a certainty that the institution must include with the proposal submission any objections it has to those terms and conditions. In other words, when responding to a contract solicitation, contract negotiations begin at the time the institution submits a proposal.

In most cases, the expectation by the sponsor to begin negotiation at the point of proposal submission is explicitly stated in the solicitation. However, in the last-minute rush to get a proposal signed and out the door, this expectation may escape the notice of someone not experienced with contracts. Or the individual may consider the inclusion of proposed award terms in the solicitation as an “FYI” by the sponsor and expect that the post-award people will take care of negotiation, as would normally be the case with a grant.

This is a very basic — but often misunderstood — distinction between grants and contracts. In an institutional model where proposal responsibilities rest with different individuals or offices, communication is vital. Without good communication, an OSP could very easily find itself in a situation where the individual who submitted a contract proposal has unknowingly accepted the contract terms — all with the same signature.

For example, the government tends to use one form, the SF 33 “Solicitation, Offer, and Award” to act as the cover page of the solicitation, the offer (or proposal), and of the contract award. For purposes of the solicitation, the SF 33 identifies which government agency / contracting activity has issued the solicitation; it includes a listing or table of contents of the entire solicitation, including the proposed award terms; and it states the submission deadline, if any.

For purposes of the offer, the SF 33 acts as the cover page, with a place for the proposer to add its identifying / contact information and its signature. Note that signature by the proposer on the SF 33 constitutes acceptance of the entire contents of the solicitation, including any proposed terms and conditions, unless exceptions are submitted with the offer. Finally for purposes of the award, the SF 33 acts as the contract cover page, including a place for the federal contract officer to sign. Therefore, if the proposer signs and submits the SF 33 without including any exceptions to the proposed terms and conditions, all that’s necessary is for the contract officer to countersign the SF 33, and the contract has been fully executed.

**Exceptions to Contract Terms**

Submitting exceptions to proposed contract terms along with a contract proposal is part

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3 The SF 33 can be found on the Web at http://www.gsa.gov/portal/forms/download/116254
of the normal contracting process. Note that mutual agreement (between parties to the contract) is not necessary at this point, merely the submission of the exceptions (if any). This is usually just the beginning of the negotiation. While it may take several weeks or even months before an institution hears back from the federal contract officer, when it does, it usually will be to discuss the exceptions noted and may include requests for clarification or additional information about the proposal.

Ideally when an institution presents exceptions, it should do so in the greatest detail possible; it should not simply state that some term or condition is “unacceptable.” An institution should state why something is unacceptable and, if appropriate, provide an alternative to the requirement that is acceptable. (An in-depth discussion of contract negotiation and the FAR is included on page 2705:13.)

There can be situations where there is simply no time to prepare a detailed list of exceptions in light of the proposal’s deadline. In these situations, there are options available, but the less detail provided about the exception, the more risk the institution takes that the sponsor will consider it unresponsive to the solicitation. If a sponsor finds an institution unresponsive, it is highly likely that the proposal will be returned without further review.

Following are various ways to address undesirable terms and conditions, if time does not permit provision of a detailed listing:

1. Include a statement in the cover letter to the contract indicating that there was insufficient time to review the terms and conditions, and that the institution reserves the right to comment on them at a later date. This is the least desirable option because the federal contract officer may simply ignore the “reservation” and treat the proposal as nonresponsive. If at all possible, contact the contract officer before deciding on this option to see if he or she will be receptive to this approach.

2. Include a general statement about the types of terms and conditions that are problematic for the institution (such as publication restrictions, export controls, and restrictions on foreign nationals). While not optimal, this approach at least puts the contract officer on notice about what the institution’s issues are.

3. Go through the proposed terms and conditions, identifying the most problematic ones, then address those in detail. Many problematic contract terms are merely undesirable, rather than absolutely unacceptable. In other words, if the institution doesn’t have sufficient time to comment on all of the terms and conditions that may be problematic, it should at least comment on the ones that it absolutely cannot accept. Keep in mind, though, that the contract officer may not be willing to enter into negotiation later regarding those clauses to which the institution did not initially take exception.

These alternative methods of raising exceptions to the proposed terms and conditions have been successful when the institution has had limited time to submit a contract proposal. They are not guaranteed to work in all situations, however, since incorporating them into a solicitation response could be seen as rendering it “not fully responsive.”
Representations and Certifications

There are other differences between grant proposals and contract proposals. For example, if federally funded, a contract solicitation will require the institution to sign and submit a set of “representations and certifications.” This is a multipage document that spells out in great detail all of the federal compliance requirements to which the proposal and/or any resulting contract will be subject. It will include the usual certifications with which an institution likely is already familiar from grant proposals, such as drug-free workplace, lobbying, and debarment/suspension. It also will include several others that are specific to federal procurement actions, such as small/large business declaration, organizational conflicts of interest, and compliance with the Cost Accounting Standards. This document will most likely be part of the solicitation package that the institution must submit, and it will be incorporated by reference into any resulting contract.

Subcontracting Plan

If the contract proposal is $650,000 or more, the institution may be required to submit a “subcontracting plan.” In federal procurement transactions, there are certain minimum requirements regarding the inclusion of minority and disadvantaged businesses that the government imposes on itself and on all those to whom it issues contracts. A subcontracting plan is the proposed plan of action to ensure that as the institution procures goods and services, it is attempting to include a minimum number of minority and/or disadvantaged businesses as vendors.

Preparation of a subcontracting plan requires access to a copy of the proposal budget and to someone who can answer questions about the budget. It also requires a detailed knowledge of the vendors normally used by the institution for acquiring goods and services. Most institutions that do a lot of business with the federal government are familiar with this requirement and will have an identified individual or office that is responsible for preparation of and reporting on subcontracting plans. If this is not the case, the institution will need to identify someone who can perform this function.

The government takes the subcontracting plan very seriously — once accepted
◆ it will be incorporated into the contract by reference;
◆ the institution will be required to report quarterly on its progress towards achieving the stated goals; and
◆ failure to demonstrate a good-faith effort to achieve the subcontracting plan goals will constitute a material breach of the contract.

The subcontracting plan may or may not be required at the proposal stage, but should not be submitted unless the institution is specifically directed to do so, either by the solicitation, or later, by the contract officer.

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4 The Cost Accounting Standards (CAS) were established by the Cost Accounting Standards Board (CASB) for colleges and universities in 1994. Under CAS universities receiving federal awards totaling $50,000,000 or more must complete a lengthy and detailed Cost Accounting Standards disclosure statement (DS-2).
One last note about submitting a proposal in response to a contract solicitation. It is very important that the institution follow all of the instructions specified in the solicitation. If for some reason the institution finds itself unable to do so, then explicitly state in the cover letter what is missing or what is different, and why an instruction was not followed completely; do not simply ignore a requirement. Technically any deviation from the solicitation requirements could be grounds for the sponsor’s not reviewing the proposal. However by addressing each such instance, the institution is at least demonstrating to the sponsor that it reviewed and considered each requirement, and that it is attempting to be as responsive to the requirements as possible. This rule-of-thumb applies to both federal and nonfederal submissions.

**Contracts and the Federal Acquisition Regulation**

No discussion of contracts would be complete without a look at the Federal Acquisition Regulation (FAR). All government procurement actions are subject to the FAR to some extent. Therefore if a research administrator is administering government contracts or subcontracts under government contracts, he or she will need to be at least familiar with the way in which the FAR works.

The FAR represents the policy and procedure manual for federal contract officers on how to construct a contract; it is written by federal employees for federal employees. Understanding how to look things up in the FAR, and the relationships between the prescriptions and clauses (discussed below), will allow one to determine whether the contracting officer constructed the contract properly for a given situation.

Many people have an aversion to the FAR and would prefer never to have to deal with it. This is often due to a lack of familiarity with the regulation. For most research administrators, contracts represent the minority of federal awards they handle. This section, therefore, provides enough of an overview of how the FAR works so that research administrators should find it less daunting. Of course, as with any set of terms and conditions, once one knows how to look things up, it is still necessary to read and understand the individual requirements.

**Structure of the FAR**

The FAR is divided into several chapters. Chapter 1 is commonly known as the “FAR” or “basic FAR,” and Chapters 2 and higher are the federal agency “supplements” to the basic FAR. There is one chapter for each executive agency. To clarify, when the FAR was originally issued in 1984, the intent was for the majority of federal contract requirements — those that applied to all federal agencies — to be included in Chapter 1. Then, in those situations where a federal agency needed to include a requirement specific to that agency, it could issue that requirement within its FAR supplement (or chapter), without the need to clutter up the basic FAR with agency-specific requirements.
Those who have experience with the Federal Demonstration Partnership\(^5\) likely will already be familiar with this concept. In any FAR-governed contract, one would normally find clauses from no more than two chapters — appropriate clauses from Chapter 1 (since Chapter 1 addresses all of the basic federal procurement requirements), and those from whichever other chapter specifically applies to the executive agency issuing the contract. An exception to this rule is where a branch of the military is issuing the contract. In this case, the institution would have the expected clauses from Chapter 1 (basic FAR), Chapter 2 (U.S. Department of Defense or DoD) and possibly clauses from one of three chapters: 51 (Army), 52 (Navy), or 53 (Air Force).

Each chapter of the FAR is divided into “parts,” with each part addressing a particular procurement topic (termination, intellectual property, inspection, property management, etc.). The titles of each part are consistent across all chapters. For example, Part 27 of Chapter 1 (basic FAR) addresses intellectual property issues, as does Part 27 of Chapter 2 (DoD supplement). The difference is that the former reflects intellectual property issues applicable across all federal agencies, while the latter reflects those additional intellectual property requirements that apply only to the Department of Defense. Figure 2 is a table that will make this structure more clear, using a very small sample of existing chapters and parts.

When looking at any chapter of the FAR, it is easy to group parts into two basic categories: the prescriptions (Parts 1-51), and the provisions and clauses\(^6\) (Part 52). Part 52 is where one finds the full text of all of the clauses referenced in a contract or solicitation; Parts 1-51 include the discussion and instructions as to when particular clauses are to be used.

In putting together a federal contract, the contract officer would start with Part 1 and work his or her way through to Part 51, reading the prescriptions (instructions) as to which clauses from Part 52 should be included in the contract given certain variables, such as purpose of the contract (R&D, supply, service, construction, etc.); nature of the contractor (for-profit, nonprofit, educational, state, etc.); and finance

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\(^{5}\) For background on the Federal Demonstration Partnership (FDP) visit www.thefdp.org.

\(^{6}\) These terms are often used interchangeably, but correct usage is as follows: a “provision” is a FAR requirement that applies to a proposal or offer, and a “clause” is a FAR requirement that applies to a contract. For practical purposes, this distinction is irrelevant, and the term “clause” will be used throughout the chapter.
type (fixed-price, cost-reimbursement, etc.). All of these variables, and several more, are discussed in Parts 1-51, which then provide, for example, specific instructions as to which termination clause or which intellectual property clause, etc., from Part 52 should be inserted into the contract.

In reviewing the contract, one attempts to “reverse-engineer” this process by identifying the FAR clause(s) referenced in the solicitation or contract document one is reviewing and looking up their full text in Part 52 of the appropriate chapters (or agency supplements). If one found any of the clauses to be unacceptable or problematic, the next step would be to backtrack from each such clause to its instruction or “prescription” somewhere within Parts 1-51. If, after reading the prescription, it turns out that the clause was incorrectly included in the contract, then one could use that very prescription as the argument to the contract officer to have the clause removed or to request a more appropriate version of the clause.

It might seem to be a daunting task to find the correct prescription for a particular clause. However, the designers of the FAR anticipated this by including at the beginning of every FAR clause a specific cross-reference to the originating prescription.

**FAR Numbering System**

The numbering system for the FAR reflects its organizational structure. Any clause contained in the contract can be identified directly back to the FAR chapter and part from whence it came. FAR clauses are numbered in the format outlined in Figure 3.

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![Figure 3. FAR Clause Numbering Structure](image)

Example A in Figure 3 displays all of the possible placeholders. Example B contains a Department of Defense clause (Chapter 2). Example C shows a Basic FAR clause (Chapter 1). Note the absence of a chapter designator. This is an idiosyncrasy in how the numbering system is used — the chapter designator is rarely if ever used with clauses from Chapter 1.

Sometimes the chapter number is written without the hyphen (e.g., 252.227-7039). This does not mean Part 252. Since there are only two possible placeholders to designate the part, and these are always the two placeholders to the left of the decimal point, once one has reached the third placeholder to the left of the decimal point, one
is looking at the chapter number. Therefore this example refers to Chapter 2, Part 52.

Again, looking at Example C, note that it includes a reference to Subsection 11. This is a reference to the 11th clause, sequentially, in Section 27. Example B references subsection 7039. Contrary to what one might conclude based on what was just described, this is not the 7039th clause in Section 27. Rather it’s the 39th clause. Many of the agency FAR supplements (that is, Chapter 2 and above) add two digits in front of the subsection number, or utilize some other numbering technique to make it more obvious that a particular FAR clause is not from Chapter 1.

**Looking Up FAR Clauses**

In the contract, a FAR clause will take the following form:

<table>
<thead>
<tr>
<th>Clause Number</th>
<th>Clause Title</th>
<th>Clause Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>252.227-7039</td>
<td>Patents Reporting of Subject Inventions</td>
<td>April 1990</td>
</tr>
</tbody>
</table>

These three pieces of information must be indicated in the contract for each FAR clause incorporated, in order for it to be a valid reference. All three are important in looking up the FAR clause as

- the **clause number** gives the institution all of the information necessary to find the clause;
- the **clause title** corroborates the number (they should both be the same in the contract and when the institution looks them up in the FAR); and
- the **clause date** lets the institution know that it is looking at the correct version of that clause.

It is important to note that the FAR is constantly being updated; each clause is subject to modification as federal laws and policy requirements change. When a contract is constructed, the version of the clause incorporated into the contract at the contract’s date of execution is the version of the clause that applies throughout the life of the contract, unless the contract is subsequently updated by formal modification and specific clauses are updated. It is important to note, therefore, for each FAR clause included in the contract, which version it is so that the version that applies to the contract can be located if necessary at some later date. While most of the clauses that a university would see in a research and development (R&D) contract do not change much over time, it is still necessary to know exactly which version of each clause applies to the contract.

The first step in looking up a FAR clause is to have access to the FAR. The next step is to determine from which chapter of the FAR the clause has been drawn: Is it a basic FAR clause (Chapter 1), or is it from one of the agency supplements (Chapters 2 and above)? Once the chapter has been identified, go to Part 52 of that chapter, as that is where all of the clauses of that chapter will be located.

The clauses will be listed in numerical order, by section and then by subsection.

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[7] See footnote 2. Also, each agency is responsible for making available its own supplement to the FAR and its respective FAR chapter can often be found on the agency’s Web site.
Read the clause and determine if it is acceptable to your institution. If it is not, look to the beginning of the clause to find a statement to the effect that: “As prescribed at [specific FAR reference], insert the following clause.” This is the cross-reference to the prescribing instruction. Then follow the cross-reference to wherever it indicates within the same chapter, read the prescription for that clause, and determine whether the clause should be in the contract given the variables of your situation (e.g., type of contractor, dollar value, contract purpose, etc.).

For example, if looking up the clause 52.249-6, the cross-reference at the beginning of the clause states: “As prescribed at 49.503(a)(1), insert the following clause.” Then, following that cross-reference to Chapter 1, Part 49, Subpart 5, Section 03, Subsection (a)(1) one would find the following:

**FAR 49.503(a)(1)**

(a) Cost-reimbursement contracts—

(1) General use. Insert the clause at 52.249-6, Termination (Cost-Reimbursement), in solicitations and contracts when a cost-reimbursement contract is contemplated, except contracts for research and development with an educational or nonprofit institution on a no-fee basis.

Having read the prescription for this clause, it is easy to see that it is intended for other than educational institutions and nonprofit contractors. This is not an appropriate clause, therefore, to include in a contract with a nonprofit. This does not specifically tell one that there is another clause for nonprofits but, given the fact that nonprofits are specifically excluded from the use of this clause, the implication is that there is another clause that should be used. And, since all of the prescriptions for the various versions of a clause addressing a particular topic are generally grouped together, it is merely a matter of scanning through the other prescriptions under 49.5 to see if there is a clause prescribed for the particular set of variables that apply. As it turns out, the prescription what we need is located at just a bit earlier in the section – 49.502:

**FAR 49.502(d)**

(d) Research and development contracts.

The contracting officer shall insert the clause at 52.249-5, Termination for the Convenience of the Government (Educational and Other Nonprofit Institutions), in solicitations and contracts when either a fixed-price or cost-reimbursement contract is contemplated for research and development work with an educational or nonprofit institution on a nonprofit or no-fee basis.

Please note that not everything is “black-and-white” when dealing with the FAR. Sometimes there can be a difference of opinion between the institution and the contract officer as to just how a prescription should be applied. For example, among the several termination clauses, there is a specific termination-for-convenience clause for use with universities performing basic research. There is also a termination-for-default clause for use in service contracts. If the institution were to find the
service contract version of the termination clause in the R&D contract (52.249-4), it
might be due to a difference in interpretation of the nature of the work the institu-
tion is doing, rather than a mistake on the part of the contract officer. In this situa-
tion, before the institution requests a change to the termination clause, it may first
need to explain to the contracting officer that the institution is performing research
and development. Of course, if the scope of work does not support the assertion by
the institution that the contract is for research and development, the institution may
not be able to convince the contracting officer to modify the contract terms.

Or it could be that not all of the information necessary to evaluate the prescrip-
tion is available within the prescription. Each part of the FAR includes a discussion
of the government’s reasoning behind the need for a particular requirement. This
can often include cross-references to federal laws or other FAR parts. Thus it may be
necessary to review the background policy and procedure statements preceding the
prescription to discover the government’s intent behind different versions of a par-
ticular requirement. This background knowledge can greatly assist the institution in
formulating an argument in getting a clause removed, particularly if the prescrip-
tion doesn’t give the institution the ammunition it needs.

Using the FAR becomes easier and faster with practice; with practice the insti-
tution will get to the point where it will immediately recognize various clauses. A
question that often is raised when discussing the FAR is: “Why hasn’t anyone come
up with a list of clauses that are universally unacceptable to universities, including
the alternate version of the clause that is acceptable?” The reason for this is that it just isn’t
practical. Each contract is different (universities accept R&D contracts, construction
contracts, and supply and service contracts), each university is different (some univer-
sities have more latitude than others as to what terms they can accept; for example,
most universities do not accept publication restricted projects, but some do). Further-
more the FAR is constantly changing. If a list of acceptable/unacceptable terms and
conditions were created, it would have to be maintained or it quickly would become
out of date. This would be very time consuming.⁸ (An institution could, however, do
this for its own purposes and assign someone to keep it up to date.)

¶2705.5 Contracts at the Negotiation/Execution Stage
Regardless of whether contract negotiations begin with submission of the proposal
or afterward, the process is the same as follows:
◆ The proposed contract terms must be reviewed.
◆ Their acceptability must be determined.
◆ Any exceptions must be submitted to the contract officer.

While negotiation techniques and strategies are beyond the scope of this chapter, it
would be useful to discuss some of the issues specific to negotiating research contracts.

⁸ An in-depth discussion of the FAR is beyond the scope of this chapter, but workshops and
other sessions are available at the NCURA annual meetings on various aspects of this topic.
See www.ncura.edu.
Fixed-Price vs. Cost-Reimbursement Contracts

Fixed-price contracts are those in which the value of the contract is determined primarily by whether the overall price of the proposal the institution submitted is a good value compared to the work to be accomplished, or by comparison to other proposals submitted for the same solicitation. In general individual items of cost are not considered. Once the parties have executed a fixed-price contract, the government is obligated to pay, provided the contractor delivers. This is the key point to understand — under a fixed-price contract, payment is usually based upon performance, whether performance is measured by meeting milestones, achieving a percentage of effort, or satisfying a set of deliverables.

If the contractor does not deliver as contractually obligated, the government does not have to pay. And the reverse is also true: If the contractor delivers, the government will pay the full contract price, even if that amount exceeds the contractor’s actual costs. In other words, provided the contractor delivers, it can keep any fixed-price funds that are in excess of its costs. Once delivery of goods or services is accepted by the government, it has basically written off the entire contract price.

The government prefers to do business using fixed-price contracts, as this places most of the financial risk on the contractor. For example, if the contractor’s costs increase beyond the price estimated in its proposal, the government will not increase the amount of the award; yet, the contractor still must deliver as specified in the contract at the originally contracted price. For the most part, only if the government changes the specifications of the contract would the contractor have the opportunity to renegotiate the price. By far the majority of government contracts are fixed price. This is the standard model used by the government when contracting with the private sector; it is also the primary method of contracting by private sector parties.

Cost-reimbursement contracts, on the other hand, are based on expenditures. The contractor is reimbursed for the expenditures it incurs in performing the contract and is not expected to perform once contract funds have been exhausted. Reimbursement is based upon submission of invoices, rather than on performance. The contractor is only expected to deliver what it can accomplish, given the available funds and period of performance stipulated in the contract.

A cost-reimbursement contract is a much riskier proposition for the government than is a fixed-price contract. Under a cost-reimbursement contract, the government may or may not receive everything anticipated in the scope of work, depending on how well the contractor estimated the necessary costs of the scope of work, or how well the contractor controlled its expenditures. But, since payment to the Contractor is based upon expenditures, if the statement of work is accomplished prior to full expenditure of the funds, the unexpended balance must be returned to the government.

The government prefers not to use cost-reimbursement contracts. It does recognize, however, that cost-reimbursement contracts are appropriate in certain situations, such as when the costs to undertake the scope of work cannot be readily determined in advance (for example, in the case of research and development). In fact most federal grants are issued as cost-reimbursement awards (e.g., payment based on expenditures, rather than performance), even though the term “cost-reimburse-
ment” is not generally used with respect to financial assistance awards. Because cost-reimbursement contracts are more risky for the government, it will usually include audit and financial reporting requirements in the contract, requirements that don’t normally appear in fixed-price contracts.

In negotiating a cost-reimbursement contract, the government will usually examine the cost proposal very carefully in an attempt to fully understand each line item and determine if it is necessary for the effort. The contract officer will most likely request back-up documentation for all personnel costs and for any other costs that are either large or inadequately justified in the budget justification. The contract officer’s job in this situation is to negotiate the contract’s total estimated cost downward, to the extent that proposed costs are not supported by adequate justification. The contract officer is attempting to reduce the government’s potential risk by capping the total estimated cost of the contract.

It may take several communications before the contract officer is satisfied with the contractor’s cost estimate. At some point the contract officer will request the institution’s best and final offer. The term “best and final offer” is really more applicable to the commercial sector, where the fee or profit is also part of the negotiation. But, then, the commercial sector is where most federal procurement activity takes place, thus many of the terms used in the FAR are based upon commercial sector concepts. In any case, when the contract officer requests the institution’s best and final offer, this is intended to be the end of the budget negotiation.

Terms and Conditions

When requesting changes to the contract’s terms and conditions, it is important to provide a detailed justification as to why the requirement is problematic for the institution, not just that it is unacceptable. When taking exception to FAR clauses, and using the prescription as the basis for the request change, it’s best to cite the reference number for the prescription for each FAR clause the institution wishes to address. For example:

FAR 52.249-6 Termination (Cost-Reimbursement)

As prescribed at 49.503(a)(1) please replace this clause with “52.249-5 Termination for the Convenience of the Government (Educational and Other Nonprofit Institutions)”, which is the appropriate termination clause for use with educational institutions.

In this example the institution requests the change and guides the contract officer to the exact spot within the FAR necessary to support the request. In so doing, the institution makes it much easier for the contract officer to come to the same conclusion the institution did and likely would generate more goodwill than simply requesting that the clause be changed. Following are some unique features of contracts.

Termination. For the most part, only the federal government may terminate a contract. The concept of mutual, 30-day advance notice of termination, customary in agreements between universities and under many financial assistance awards, does not exist in the procurement world (although it could theoretically be negotiated into the contract terms).

Equipment. By default, title to equipment will vest in the government, unless
specified otherwise in the contract. Most universities would then request title at the end of the contract, at the point at which they request disposition instructions from the government. (Depending upon the circumstances, the government often approves such requests.) All government-owned equipment must be tracked and accounted for in accordance with the property management clause of the contract.

**Cost Principles.** By default the commercial cost principles will apply to cost-reimbursement-type federal contracts; these are detailed in Part 31.2 of the FAR. In order to get the institution’s cost principles to apply, request that the “Allowable Cost and Payment” clause (52.216-7) be modified appropriately. Note that cost principles do not apply to fixed-price contracts, only to those that are cost reimbursement.9

**Administrative Requirements.** That portion of the Uniform Guidance that describes administrative requirements, 2 CFR 200.200 through 200.329, and 200.333 through 200.399, will not apply to Contracts. Note, however, that the subrecipient monitoring requirements of the Uniform Guidance, 2 CFR 200.330 through 200.332, will apply to subcontracts for programmatic effort issued under federal prime contracts. The reason for this is that all of the administrative issues addressed by the Uniform Guidance (property management, procurement, audit, inspection, access to records, reporting, etc.) are already covered by the various clauses of the FAR. This is one of the risks for an educational institution in accepting contracts — the assumption that existing institutional systems, which may be sufficient for compliance with the Uniform Guidance, will also be sufficient to manage the contract’s administrative requirements. They may be, or they may not be. Each contract must be reviewed in light of this risk.

**Subcontracts.** The concept of a subaward (a subcontract for programmatic effort) is not recognized by the FAR. When the government uses the term “subcontract,” within the FAR, it is referring to all contracts, consulting agreements, purchase orders, procurement card transactions, etc., entered into under the contract. It is important to keep this in mind when reviewing the “subcontracts” clause (52.244-2) that is included in most contracts. Further, since the administrative requirements of the Uniform Guidance (2 CFR 200.200 through 200.329 and 200.333 through 200.399) do not apply to contracts, programmatic effort subcontracts are not exempt from the standard federal cost/price analysis and open bid requirements, the way they would be in a financial assistance award. The subrecipient monitoring requirements of the Uniform Guidance (2 CFR 200.330 through 200.332), on the other hand, do apply to programmatic effort subcontracts under federal prime contracts. This means that programmatic effort subcontracts must meet both the procurement standards of the FAR as well as the subrecipient monitoring requirements of the Uniform Guidance. Lastly the inclusion of a subcontract as a line item in the budget does not con-
stitute prior approval of the subcontractor, only of the need to acquire that service or commodity. Prior approval of the transaction, or at least prior notification, may still be required by the contract officer, in accordance with the subcontracts clause.

**Period of Performance.** A contract’s start date, by default, is the date of signature by the government. This can pose a problem for researchers who assume that they will have the freedom to obtain pre-award costs up to 90 days before the official start date. “Expanded authorities” that provide certain flexibility to award terms only apply to financial assistance awards (via the Uniform Guidance). Therefore it is important to educate researchers regarding the *substantially greater risks associated with advance spending in anticipation of contract awards.*

**Audit Requirements.** The Uniform Guidance applies to cost-reimbursement contracts in addition to financial assistance awards. This includes the subrecipient monitoring requirements of the Uniform Guidance, even though the FAR does not recognize the concept of a subaward.

**Negotiations.** One of the most difficult situations that can arise is when the principal investigator (PI) on a contract wants to accept a contract that has terms and conditions that are unacceptable to the institution. PIs often become frustrated as a result of the protracted negotiations that sometimes occur when universities negotiate complex contracts. As with any negotiation, it is important to keep the PI informed of the progress and to include him or her in the process and to explain which clauses are problematic and why. Often the institution can use the PI’s relationship with the federal program officer as leverage when the negotiations reach an impasse. In such a case, ask the PI to contact the program officer and explain the situation. If the PI can obtain the program officer’s support, it may greatly help move the process along, as the contract officer would then receive the same message from both sides.

### 2705.6 Contracts After the Award

PIs and support personnel who are used to working with a particular agency may be accustomed to the reporting and prior-approval requirements of that granting agency, and therefore should be given a heads up that the terms of the contract should be reviewed carefully because *every contract is unique.* Reporting requirements will be detailed in the contract, as will the termination, invoicing, payment, property management, inspection, and other requirements. For most financial assistance awards, these issues are addressed using a commonly applicable, standard set of terms and conditions that are incorporated by reference into the award. With a contract, however, each of the requirements in the contract has been specifically selected for the particular situation.10

Institutions unaccustomed to managing contracts often find themselves in difficulty when those responsible for the administration of a contract make the assump-

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10 Note that the full text of most of the FAR clauses will not be included in the contract; they would still need to be looked up in the FAR. The point is, however, that the individual clauses were specifically chosen for the contract.
tion that the terms will be the same as with a financial assistance award. The most important action that can be taken at the point of contract award is the clear and detailed dissemination of contract requirements to those responsible for administering the award.

For central and departmental personnel unaccustomed to managing contracts, it is not enough to simply provide a copy of the contract. If any of these individuals are unfamiliar with contracts, they may in all likelihood simply ignore the included FAR clauses, either because they don’t know what they are, or if they are vaguely aware of them, they may assume that they are more of the “representations and certifications-type” requirements that don’t directly affect the day-to-day management of the award. Therefore it is essential that the office that disseminates the award also provide sufficient detail of the contract requirements, especially to those who may not be familiar with how contracts work, such that PIs and support personnel can perform their jobs in accordance with the contracts’ terms.

While it is not practical to provide a list of all possible contract requirements, Figure 4 contains a sampling of FAR clauses often seen in R&D contracts with universities that have some direct impact on project administrators and/or PIs. (For an in-depth discussion of FAR clauses relating to publication rights, data rights, and intellectual property, see Chapter 1900.)

Figure 4. Sample FAR Clauses in R&D Contracts with Universities

<table>
<thead>
<tr>
<th>Clause #</th>
<th>Clause Title</th>
<th>Brief Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>52.216-7</td>
<td>Allowable Cost and Payment</td>
<td>Establishes, invoicing, payment and closeout requirements for cost-reimbursement contracts. Also identifies applicable cost principles.</td>
</tr>
<tr>
<td>52.219-9</td>
<td>Small Business Subcontract Plan</td>
<td>Requires submission of periodic reports documenting progress made towards meeting subcontract plan goals.</td>
</tr>
<tr>
<td>52.232-20</td>
<td>Limitation of Cost</td>
<td>Requires contractor to notify the government when, in the next 60 days, expenditures will reach a specified percentage of obligated funds.</td>
</tr>
<tr>
<td>52.232-22</td>
<td>Limitation of Funds</td>
<td>Requires contractor to notify the government when, in the next 60 days, expenditures will reach a specified percentage of obligated funds.</td>
</tr>
<tr>
<td>52.244-2</td>
<td>Subcontracts</td>
<td>Specifies prior approval and notification requirements for the issuance of subcontracts (Note: This clause applies to all subcontracts, including purchase orders).</td>
</tr>
<tr>
<td>52.245-1</td>
<td>Government Property</td>
<td>Establishes vesting of title (default is government), record keeping, and reporting requirements for equipment.</td>
</tr>
<tr>
<td>252.204-7000</td>
<td>Disclosure of Information</td>
<td>Requires prior governmental approval of publications.</td>
</tr>
<tr>
<td>252.227-7039</td>
<td>Patents - Reporting of Subject Inventions</td>
<td>Requires submission of annual and final summary-invention reports on DD Form 882.</td>
</tr>
<tr>
<td>252.235-7010</td>
<td>Acknowledgement of Support and Disclaimer</td>
<td>Establishes requirement for “acknowledgement and disclaimer” statements in publications.</td>
</tr>
<tr>
<td>252.235-7011</td>
<td>Final Scientific or Technical Report</td>
<td>Specifies default technical reporting requirement.</td>
</tr>
<tr>
<td>252.246-7000</td>
<td>Material Inspection and Receiving Report</td>
<td>Requires that DD Form 250 be included with all deliverables (including technical reports).</td>
</tr>
<tr>
<td>1852.242-73</td>
<td>NASA Contractor Financial Management Report</td>
<td>Requires contractor to submit quarterly and/or monthly financial management reports.</td>
</tr>
</tbody>
</table>


¶2705.7  **Stop-Work Order**

A “stop-work” order is an instruction issued by the government in order to suspend work under a contract but without terminating the contract. The order will specify a date beyond which the contractor may not perform. In other words, any costs incurred after that date become unallowable, except to the extent that they were in some way unavoidable. The most important thing to know about a stop-work order is that if an institution receives one, the institution must in turn issue one to each subcontractor working under the contract at the time of the stop-work, giving them the same date to stop work. If the institution does not issue orders to subcontractors, the institution will likely still be liable for their expenditures, but will not be reimbursed by the government for any of those costs incurred by the subcontractor after the date specified in the stop-work order.

A stop-work order by default can only last for 90 days before the government must do one of the following:

◆ Authorize work to begin
◆ Extend the stop-work period
◆ Terminate the contract

If the stop-work order is lifted, the contractor may submit a proposal to the government to request reimbursement for costs incurred as result of the stop-work order (but not during it). For example, if project employees left because of lack of work, there could be costs associated with hiring and training replacements once work has been reauthorized. If the contract is terminated, then the contractor would submit a termination proposal in accordance with the termination clause.

¶2705.8  **Contracts with the Private Sector**

Contracts with the private sector can present unique challenges for any institution. Often difficulties arise due to differences in organizational “culture.” Academe is nonprofit and supports research and education by the free and open exchange of information. On the other hand, the private sector is for-profit and may conduct or participate in research, but needs to maintain secrecy in such endeavors in order to ensure economic viability over its competitors. The cultures are not mutually exclusive, but a lack of understanding by one party of the other’s viewpoint can make collaborations difficult.

As just mentioned, the private sector approaches research differently than does a university. The types of contract terms and conditions to which universities customarily take exception, such as terms that restrict an institution’s ability to freely disseminate information, are all standard business practices in interactions between private sector entities and even between the private sector and the federal government.

Unlike “collaborations” among universities, business relationships are not generally viewed by the private sector as collaborations; rather there is a buyer and a seller in such relationships. When a company offers a contract to a university, it is usually looking at the arrangement as a purchase, not as a collaboration. So it is
reasonable from the company’s viewpoint to include commercial terms and conditions in the contracts they offer to universities, even when two universities would treat the same scope of work as a collaboration. Unless they have experience with university research culture, often companies simply don’t understand why universities have so many concerns over what to them is standard practice.

There are two primary modes of interaction between universities and the private sector: contracts using the company’s own funds, and subcontracts issued under a federal prime contract. There are many issues that may arise when working with the private sector, such as intellectual property, material transfer, confidentiality, export controls, and publication rights. Depending upon whether the contact involves private or federal funding greatly influences the extent to which these issues raise concerns with universities.

**Private-Sector Contracts under Private Funding**

One of the most useful tools that an institution can have at its disposal when collaborating with private sponsors is a standard research agreement template. The template acts as a starting point for negotiations and should incorporate all of the terms and conditions that the institution feels are necessary, such as right to publish, ownership and licensing of intellectual property, confidentiality, and indemnification.

Providing this template along with the proposal to a company can go a long way toward facilitating the negotiation process. To begin with, the institution is letting the company know up front where it stands. Secondly the institution is, in a sense, preempting the company’s issuance of a purchase order with commercial terms and conditions. Further it is more advantageous for the institution if the negotiation starts by modifying the institution’s agreement, than for the institution to be trying to modify the company’s contract or purchase order.

Many institutions are using such agreement templates successfully with industry. Thus, if an institution is looking to develop a template or update an existing one, it might be helpful to obtain copies from sister institutions and talk to colleagues about their experiences in using such templates.

**Private-Sector Contracts under Federal Funding**

One of the cultural differences between universities and the private sector is how each responds to a federal solicitation. A company looks at a solicitation as a business opportunity — a chance to further its business goals and to generate revenue. If the company decides to respond to the solicitation, it will establish a team dedicated to putting together the cost and technical proposals; it would be almost unthinkable for a company to submit competing applications in response to the same solicitation.

University proposals, on the other hand, tend to be PI driven. A PI decides to which opportunities he or she will apply, and it is not unusual for more than one PI at an institution to submit applications to the same solicitation or opportunity. PIs are usually the lead for their respective proposals, and central administration often does not become involved until requested to do so. As a result, university/industry collaborative submissions can be a learning experience for both parties.
When a company is subcontracting with federal funding, another layer of complexity is added. This is because federal awards normally impose upon the awardee the requirement to flow down certain terms and conditions to any subawardees. So an industry subcontract will include the federal terms that must be flowed down, plus most of the commercial terms and conditions it would normally impose on a supplier.

Many large companies do so much subcontracting that they have developed boilerplate terms and conditions that combine both their commercial terms and the federal flow-down requirements. In the majority of cases, the flowed down FAR clauses will be incorporated into the boilerplate terms in the same format as the institution would have received them directly from the federal government. But the institution will also come across situations where the company will have re-written the federal terms, such that the identifying FAR clause numbers and titles have been removed. The federal requirements are still intact, they are just not as easily identifiable as specific FAR clauses. Having access to an electronic or online version of the FAR is important in these situations, because the best argument to get an undesirable FAR clause modified or removed is to refer back to the clause’s prescription.

As an institution reviews the terms of the subcontract, it still must determine the acceptability of each requirement. When a university receives a private-sector contract that uses the company’s own funds rather than federal funds, the agreement truly represents only what the two parties have agreed upon. Under a federal award a company may be reluctant to negotiate the flow-down terms because it simply does not feel it has the authority to do so. Thus when a university is requesting changes to requirements — such as prior approval of publications — it is important to understand that the company must first be convinced that the requirement should be changed, and that it may then have to convince the federal contract officer of the importance of the issue in order to obtain a deviation from having to flow down the requirement to the institution.

Inventions under Federal Subcontracts
According to federal statute (the Bayh-Dole Act), the government receives a non-exclusive, royalty-free license to any inventions generated with federal dollars, no matter how far down the procurement chain the invention was developed. As a result, in this one situation, there is a direct relationship established between the government and every subcontractor. The government’s rights are known as “government purpose license rights.” Also, according to the Bayh-Dole Act, a contractor may not “take” rights to a subcontractor’s inventions as a condition of issuing the subcontract. The subcontractor can agree to give up those rights by accepting terms to that effect, but the prime contractor cannot force them to do so. (For an in-depth discussion of the Bayh-Dole Act, see Chapter 1900.)

The company with whom the institution is negotiating may justify its need for ownership and/or control of inventions to ensure that it has access to the technology in order to accomplish the prime contract requirements. However, it already receives whatever access it needs to accomplish the government’s objectives by virtue of its prime contract with the government. Because the government already has its
government purpose license rights, the company obtains the rights it needs via this mechanism.

When reviewing subcontracts of federal funds, therefore, be sure to look for wording that gives the company rights to the inventions; the institution will most likely want to remove it. A company can request — but not force — an institution to give up such rights.

¶2705.9 Special Issues for Small Institutions

The challenge for small institutions in administering contracts is that regardless of the institution’s size, all contract requirements must be followed. For example, if an institution accepts a contract that requires submission of a subcontracting plan, then the institution must find a way to comply with the requirement, even though large institutions often have an individual or even an office dedicated to this one compliance function. No allowance is made by the government for lack of resources when it comes to compliance.

Depending upon the sponsor, contracts can impose a greater administrative burden on the institution than do grant awards, sometimes requiring quarterly or even monthly technical reports, quarterly property reports (title to equipment almost always vests in the government with contracts), annual summaries of disclosed inventions, detailed invoicing, etc. It is vital, therefore, when deciding to accept a contract, that the institution determine up front that it has, or can put into place, the systems necessary to comply with contract requirements.

¶2705.10 Conclusion

There are several potential areas of risk for institutions involved in contract administration and ways to mitigate them including

◆ *unknowingly accepting problematic contract terms upon signing a proposal* (Educating those who approve contract proposals regarding the implication of their signatures will help ensure a successful start to contract negotiations.);

◆ *inexperience with essential topics such as the Federal Acquisition Regulation or intellectual property issues under contracts* (Knowledge of the FAR and of patent and licensing issues is critical if an institution is going to accept federal and industry contracts.); and

◆ *distribution of insufficient award information to research administrators* (Detailed communication of contract requirements to administrators is essential for successful completion of the contract.).

In summary while acceptance of contracts by an institution can pose greater risks than are usually associated with financial assistance awards, these risks are manageable with sufficient communication and education. Contracts represent by far the minority of awards received by educational institutions. As a result the necessary expertise to administer them properly may not be easily accessible at every institution. Most research administrators are more than happy to share their knowledge on these and other issues. Colleagues are the best resource.
Supplementary Material

Federal Supplies and Services Contracting with Universities: Risks and Realities

Kathleen Lorenzi, University of Colorado Boulder, and Vincent A. "Bo" Bogdanski, Colorado State University

The ‘cat is out of the bag;’ universities will accept commercial purchase orders from the federal government based on FAR 12, Acquisition of Commercial Items (“FAR 12 POs”). This could be one of the worse kept secrets in higher education second only to the idea that, “universities do not ever accept publication restrictions.” Now that you have gasped with total surprise, have gathered your wits (and, possibly, quit laughing), be assured our intention is not to condemn the practice of FAR 12 POs but to help you identify some of the pitfalls, risks and potential consequences in accepting a FAR 12 PO. We include a few recommendations on how to address FAR 12 terms and work with your federal counterpart.

Let’s start with a few assumptions

First and foremost, the Federal Acquisition Regulation (“FAR”) is a sophisticated and comprehensive document written and modified by a system that continues to produce a usable, understandable, fair and equitable regulation based on many years of experience and case law. Any one of us can criticize or disagree with any part of the FAR based on our own biases or situations but we believe the document does what it represents, providing “uniform policies and procedures for acquisition by all executive agencies” (FAR 1.101).

Second, some may think that universities should have a unique version of the FAR directed at institutions of higher education only. This is clearly impractical. Considering university involvement in the overall federal acquisition scheme, a considerable number of clauses with alternative rules have been developed for our institutions and our research enterprise. Special needs of higher education have been specifically addressed; thus, expecting additional special consideration for higher education is unrealistic.

Third, do not assume that your federal counterpart knows about the FAR alternatives for universities or that they have ever previously worked with a university. The secret is to work with your federal counterpart and educate them on the appropriate clauses. To do so, be prepared to support your discussions with hard facts based on FAR instructions (e.g. prescriptions), understanding the requirements of the statement of work, and being familiar with what has been proposed. One of the issues that will annoy your government counterpart is a university representative’s inability to explain the basis of their arguments on why universities should be treated differently than any other organization. As such, they may hesitate to make

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the changes in the contract as requested. Do not fall into that trap; recognize that a major part of negotiation is the ability to explain to the other side the basis for any request that you make and why it is a good idea.

To understand the purpose of FAR Part 12, one must remember why FAR Part 12 was developed in the first place. At the end of the 1980s the DoD was finding that more and more of their suppliers were leaving the federal marketplace due to the overbearing requirements for cost accounting standards and audits that were creeping from their government units into their commercial units (e.g. selling supplies and services to the general public). If a contractor was involved with any federal contract, the whole company was subject to federal contracting requirements including that commercial unit. These non-traditional requirements added costs that made the commercial units unable to compete in a true commercial (e.g. non-federal) marketplace.

In all fairness, the government’s move to apply cost accounting requirements and audits to all areas of the business of a federal contractor was a result of revelations at the time about $500 hammers and $600 toilet seats. Most companies who were involved in an investigation by the government of overpricing federal contracts also had commercial units. In all the confusion and negative press (plus a couple of election cycles) the government seemed to forget the conceptual differences between: 1) a top-down pricing of the commercial marketplace based on competition of standard items where the risk of performance was on the company (e.g. a fixed price scenario), and, 2) the bottoms-up pricing based on estimating cost elements of an R&D project where the technical approach was the key determinate of award success and the government was willing to share the risk of the project (e.g. a cost reimbursable scenario). As this process progressed, the government recognized that most of their needs were commercially oriented and that they could buy the same goods and services as sold to the general public. With the removal of the cost/pricing and audit requirements, providing for a true competitive marketplace, the cost of goods went down. The result in the early 1990s was FAR 12 to provide the government the ability to use tools as close to a commercial PO as possible in order to benefit from the competitive marketplace.

The phrase “as possible” is used because there are still a number of federal requirements that will apply to any federal PO that cannot be eliminated because the government is a sovereign entity. The US federal government is the largest purchaser of goods and services in the world. As such, the US government uses its buying power to leverage their implementation of federal social, ethical, economic and environmental policies through its procurement system. A list of these laws/policies can be found in FAR 52.212-5, Contract Terms and Conditions Required to Implement Statutes and Executive Orders – Commercial Items, and are applied to each commercial purchase as appropriate.

Outside of research and development (R&D), the writers of the FAR either may not have anticipated that universities would be involved in commercial item contracting, or if involved, universities would be expected to compete against the commercial sector on the same basis as all bidders. Therefore, there are no clauses for
commercial supplies and services that are directed specifically toward the unique nature of universities or nonprofits. On the other hand, there are many agencies that primarily acquire commercial goods and services and do not do much, if any, R&D. In these cases, these agencies only know one tool, the FAR 12 PO (e.g. Standard Form 1449, Solicitation/Contract/Order for Commercial Item), and one way to acquire goods and services. A third reason the writers of the FAR did not anticipate the participation of universities is that, historically, universities receive grants, cooperative agreements and contracts for R&D and are not intended to be involved in service and supply procurement activities that require “unique” rules.

Two things to note: the FAR does not delineate between services and research, nor does it delineate between a PO and contract. In FAR Part 35, Research and Development, services are not mentioned. R&D is divided into only three components and defined at FAR 2.101 for “Basic Research,” at 35.001 for “Applied Research,” and at 35.001 for “Development.” These definitions are short, succinct and are directed toward those kinds of organizations that have the unique capabilities for R&D contracting, including universities. Commercial items are defined separately at FAR 2.101 and the definition, as follows, is long and involved:

(1) Any item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and—

(i) Has been sold, leased, or licensed to the general public; or

(ii) Has been offered for sale, lease, or license to the general public;

(2) Any item that evolved from an item described in paragraph (1) of this definition through advances in technology or performance and that is not yet available in the commercial marketplace, but will be available in the commercial marketplace in time to satisfy the delivery requirements under a Government solicitation;

(3) Any item that would satisfy a criterion expressed in paragraphs (1) or (2) of this definition, but for—

(i) Modifications of a type customarily available in the commercial marketplace; or

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. “Minor modifications” means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of a process. Factors to be considered in determining whether a modification is minor include the value and size of the modification and the comparative value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor;

(4) Any combination of items meeting the requirements of paragraphs (1), (2), (3), or (5) of this definition that are of a type customarily combined and sold in
combination to the general public;

(5) Installation services, maintenance services, repair services, training services, and other services, if-

   (i) Such services are procured for support of an item referred to in paragraph (1), (2), (3), or (4) of this definition, regardless of whether such services are provided by the same source or at the same time as the item; and

   (ii) The source of such services provides similar services contemporaneously to the general public under terms and conditions similar to those offered to the Federal Government;

(6) Services of a type offered and sold competitively in substantial quantities in the commercial marketplace based on established catalog or market prices for specific tasks performed or specific outcomes to be achieved and under standard commercial terms and conditions. For purposes of these services—

   (i) "Catalog price" means a price included in a catalog, price list, schedule, or other form that is regularly maintained by the manufacturer or vendor, is either published or otherwise available for inspection by customers, and states prices at which sales are currently, or were last, made to a significant number of buyers constituting the general public; and

   (ii) "Market prices" means current prices that are established in the course of ordinary trade between buyers and sellers free to bargain and that can be substantiated through competition or from sources independent of the offerors.

(7) Any item, combination of items, or service referred to in paragraphs (1) through (6) of this definition, notwithstanding the fact that the item, combination of items, or service is transferred between or among separate divisions, subsidiaries, or affiliates of a contractor; or

(8) A non-developmental item, if the procuring agency determines the item was developed exclusively at private expense and sold in substantial quantities, on a competitive basis, to multiple State and local governments.

The chasm between the definitions of R&D and commercial items is very wide. Universities should take advantage of this gap and initially maintain that all contracts through a sponsored project office (SPO) should be considered R&D. On occasion, universities do offer supplies and services that can be identified as supplies (defined at FAR 2.101) or services (defined at FAR 29.401). However, those supplies and services are usually associated with Specialized Service Facilities (OMB Circular A-21, J-47) that are offering their excess capacity for sale to the general public. These transactions are normally not handled by the SPO and are not addressed by this article.

When responding to a FAR 12 solicitation or replying to the award of a FAR 12 PO, the nature (R&D) and type (cost reimbursable or fixed price) of a proposed contract is very important because it will dictate the nature of the clauses to be
used in the procurement. Research administrators negotiating a FAR 12 PO must be prepared and willing to defend their approach to a federal contracting representative. Sometimes the government contracting officer uses the FAR 12 PO as a matter of government convenience which should not be a deterrent from potential negotiations. However, convincing the government contracting officer may be as hard as convincing a PI that there is no such thing as a fixed price grant containing FAR clauses.

One may ask why FAR 52.213-4 Terms and Conditions - Simplified Acquisitions (Other than commercial Items) are not used instead of FAR 52.212-4, Contract Terms and Conditions – Commercial Items. Good question; the reason may vary from agency to agency. FAR 13 procurements are only for procurements of less than $150,000 (e.g. simplified acquisition threshold) with the intent to offer a simplified process for lower dollar acquisitions that do not require a full blown FAR contract, cost and pricing data, or are a true commercial item or service. (FAR 12 dollar thresholds are much higher and may vary depending on the commodity purchased). In addition, the FAR does not define “other than commercial” so there isn’t much, if any, relief from requirements in FAR 13. Further, the terms in FAR 52.213-4 closely mirror those clauses required in federal FAR 12 POs.

**Why the Focus on Definitions?**

Definitions are key to understanding the intent in any contract. The FAR recognizes research as one of the three stated missions for higher education and has written clauses directly related and advantageous to the research mission. R&D contracting carries less risk and affords more benefits to higher education not available in those contracts providing supplies and/or services under federal commercial terms. Admittedly, some FAR clauses meet the definition of cost reimbursement only, but are still an advantage for universities because cost reimbursement is common in R&D contracting while not common for supplies or services. In fact, the current directed policy of Congress (expected to be stated in the pending Defense Authorization Act 2012) and the Office of Federal Procurement Policy (OFPP)(Memorandum of October 27, 2009, “Increasing Competition and Structuring Contracts for the Best Results”) is that fixed price contracts are now the standard for all procurement activities with cost reimbursable contracting being the exception and requiring justification and additional approvals at various levels of management.

An agency can use a number of tools in the acquisition process for commercial items including FAR Part 15, Contracting by Negotiation (as approved in FAR 12.102). The good news for you is FAR Part 15 says “a contract awarded using other than ‘sealed bidding procedures’ is a negotiated contract (15.000).” So you have every right to contact your contracting officer. Sealed bids are about as rare as a PI who likes your F&A rate. If you can use FAR 15, we suggest that the following sample of clauses be added, as they are appropriate for university research and development projects:

- FAR 52.215-2, Audit of Records – Negotiation with Alternate II
- FAR 52.216-7, Allowable Costs and Payment, with a change in reference from
FAR part 31.2 to FAR part 31.3
◆ FAR 52.216-15, Predetermined Indirect Cost Rates
◆ FAR 52.216-11, Cost Contract – No Fee, with alternate 1 (with no hold-back)
◆ FAR 52.227-1, Authorization and Consent
◆ FAR 52.227-2, Notice and Assistance Regarding Patent and Copyright Infringement
◆ FAR 52.227-11, Patent Rights-Ownership by the Contractor
◆ FAR 52.227-14, Rights in Data General – with Alternate IV
◆ FAR 52.230-5, Cost Accounting Educational Institutions (if applicable)
◆ FAR 52.230-6, Administration of Cost Accounting Standards (if applicable)
◆ FAR 52.232-20, Limitation of Costs (if applicable)
◆ FAR 52.232-22, Limitation of Funds (if applicable)
◆ FAR 52.232-5, Prompt Payment
◆ FAR 52.245-1, Government Property with Alt II with the University being the designate owner/title holder of any Government Property acquired or fabricated.

Now focus on the types of clauses typically found in federal commercial contracts. The FAR allows for “tailoring” of certain clauses but does not give any particular guidelines as to what can be tailored and to what extent. However, FAR 12.302(a) specifically states that “The provisions and clauses established in this subpart are intended to address...commercial market practices for a wide range of potential Government acquisitions of commercial items. However, because of the broad range of commercial items acquired by the Government, variations in commercial practices, and the relative volume of Government acquisitions in the specific market, contracting officers may, with the limitations of the subpart, and after conducting appropriate market research, tailor the provisions of at 52.212-1 ... and 52.212-4 to adapt to the market conditions for each acquisition.” Section (c) goes further to state, “the contracting officer shall not tailor any clauses or otherwise include any additional terms or conditions ...in a manner that is inconsistent with customary commercial practice for the item being acquired unless a waiver is approved...” As a good negotiator, you can develop arguments to delete or modify any of these or other objectionable clauses as being customary to a “university market.” Will your arguments hold up during negotiations or during an adverse event? This question is interesting because there is no FAR definition that differentiates a commercial purchase from the “university market.” Your negotiation skills are the key.

FAR 52.212-4 contains the standard terms and conditions for a FAR 12 PO that can be negotiated. The following matrix (Figure 2720.1-1) will help you in recognizing the standard terms and possible alternative terms that a university may be able to negotiate. Please note that the response may need to be addressed differently by different institutions.
## Figure 2720.1-1: Roles of Training Program Committees

<table>
<thead>
<tr>
<th>CLAUSE</th>
<th>FEDERAL STANDARD REQUIREMENT</th>
<th>UNIVERSITY RESPONSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>Inspection / Acceptance</td>
<td>Contractor shall only tender for acceptance those items that conform to the requirements of this contract. The government reserves the right to inspect or test any supplies or services that have been tendered for acceptance. The government may require repair or replacement of nonconforming supplies or re-performance of nonconforming services at not increase in contract price.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please delete.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The University works on a reasonable efforts basis therefore, insert in lieu thereof FAR 52.246-9, Inspection of Research and Development. This clause is more appropriate to the research and development outcomes (e.g. results) of a public university.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>In addition, due to constitutional prohibitions on pledging the good faith and credit of the state, the University cannot agree to the repair or replacement, or a reduction in estimated costs.</td>
</tr>
<tr>
<td>b</td>
<td>Assignment</td>
<td>Contractor may assign its rights to receive payment Generally OK</td>
</tr>
<tr>
<td>c</td>
<td>Changes</td>
<td>Changes to terms and conditions may be made only by written agreement. Generally OK</td>
</tr>
<tr>
<td>d</td>
<td>Disputes</td>
<td>Subject to the Contracts Disputes Act of 1978 Generally OK</td>
</tr>
<tr>
<td>e</td>
<td>Definitions</td>
<td>FAR 52.201-1 Definitions is incorporated Generally OK</td>
</tr>
<tr>
<td>f</td>
<td>Excusable Delays</td>
<td>Contractor shall be liable for default unless non-performance is caused by an occurrence beyond the reasonable control of the contractor. Generally OK</td>
</tr>
<tr>
<td>g</td>
<td>Invoice</td>
<td>Provides instructions for invoicing and may implement the Prompt Payment Act Generally OK. However, please note that university research will not fit the requirements as requested in subsections (iv) or (v) nor does a university provide any discounts for prompt payment per (vi).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please insert FAR 52.232-5, Prompt Payment. The Electronic Funds Transfer information is attached to this letter.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please delete and insert one of the following; 1) If this is a cost reimbursable contract, the University will invoice approximately monthly and will include a breakdown of costs incurred by budget category and a summary of costs incurred to date, 2) If this is a fixed price contract, the University requests that a payment schedule be negotiated commensurate with the scope and schedule of the project to allow for adequate cash flow to support the project.</td>
</tr>
<tr>
<td>h</td>
<td>Patent Indemnity</td>
<td>The Contract shall indemnify the Government... against liability, including costs, for actual or alleged direct or contributory infringement of, or inducement to infringe, any US or foreign patent, trademark or copyright arising out of performance.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Please delete. This clause is intended to be used for a company that is a merchant manufacturer and seller of commercial hardware and/or software. The University is not a merchant manufacturer or a commercial enterprise.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Universities do not customarily warrant the results of their research as inventions/patents have not yet been identified and, per the practice of our federal sponsors, our research contracts contain FAR 52.227-1, Authorization and Consent, and 52.227-2, Notice and Assistance Regarding Patent and Copyright Infringement.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>More importantly, the constitution and laws for public universities prohibits the University from providing warranties or indemnifying other parties in relation to the results of their research.</td>
</tr>
<tr>
<td>i</td>
<td>Payment</td>
<td>Based on items accepted</td>
</tr>
<tr>
<td>j</td>
<td>Risk of Loss</td>
<td>Contractor is responsible for risk of loss until passed to the government unless the contract states otherwise.</td>
</tr>
<tr>
<td>k</td>
<td>Taxes</td>
<td>Contract price includes applicable federal, state and local taxes and duties.</td>
</tr>
<tr>
<td>l</td>
<td>Termination for the Government’s Convenience</td>
<td>Government can terminate at will. The contractor shall be paid a percentage of the contract price reflecting the percentage of work performed prior to the notice of termination.</td>
</tr>
<tr>
<td>m</td>
<td>Termination for Cause</td>
<td>Government may terminate in the event of default of the contractor or the failure of the contractor to comply with the T&amp;Cs. Contractor is liable to the Government for any and all rights and remedies provided by law.</td>
</tr>
<tr>
<td>n</td>
<td>Title</td>
<td>The government takes title to items delivered unless the contract says otherwise.</td>
</tr>
<tr>
<td>o</td>
<td>Warranty</td>
<td>The contractor warrants and implies that the items delivered [under the contract] are merchantable and fit for the particular purpose described in the contract.</td>
</tr>
<tr>
<td>p</td>
<td>Limitation of Liability</td>
<td>Except as otherwise provided by an expressed warranty, the Contractor will not be liable to the Government for consequential damages resulting from any defect or deficiencies in accepted items.</td>
</tr>
<tr>
<td>q</td>
<td>Other Compliances</td>
<td>The contractor shall comply with all applicable federal, state and local laws, executive orders, rules and regulations applicable to its performance under this contract.</td>
</tr>
<tr>
<td>r</td>
<td>Compliance with laws unique to Government Contracts</td>
<td>Incorporates clauses such as “Officials not to Benefit,” “Contract work hours,” “Safety Standards Act,” “Anti-Kickback Act of 1986,” “Fly America,” etc.</td>
</tr>
</tbody>
</table>
Order of Precedence

Defines the precedence of the special terms and the general terms including q and r requirements listed above.

Central Contractor Registration

Required for all federal contractors

Generally OK. Be familiar with how changes to a FAR 12 PO are incorporated into the document. A suggested request in a cover letter; If the requested changes are implemented as an attachment to the Purchase Order, please make this letter #2 in the Order of Precedence as it will constitute a change to all other terms and attachments referenced there under.

Should not be a problem. Please note that any and all subcontractors are also required to be registered in CCR.

We also suggest that you include the list of FAR clauses provided in the paragraph above related to FAR 15 in any submittal or exceptions letter. In addition, be sure and define a payment schedule conducive to the work being done. If you do not define a payment schedule, the government may not be obligated to make a payment until such time as the final deliverable is received thereby causing cash flow problems for your university.

So, What Should Be Done?

We recommend that any federal contract which can be reasonably considered R&D should be awarded using R&D clauses regardless of the contract form used. The definitions of R&D versus commercial as mentioned above will help in your proposal and award negotiation. The concept of R&D versus commercial is best developed at the proposal stage with a proposal submittal letter. If the contract comes to your institution as a commercial PO you should open negotiation for a R&D type contract immediately or the government may consider the PO is accepted as is. If this means going back to the “drawing board,” so be it. You can always quote the immortal words of Murray in the play The Odd Couple, “what do you want, speed or accuracy?”

If you feel you are the only responsible/responsive proposer, negotiate the R&D contact with the appropriate clauses prior to submitting a proposal. You are holding “four aces” and it’s a pretty good bet you will win “the hand.”

If the request for quote seems to be directed only toward institutions of higher education in a competitive environment, consider proposing an R&D fixed price contract with the appropriate clauses.

If the request for quote seems to be directed toward a wider source list but still only a limited number of qualified organizations, consider proposing using an R&D fixed price contract with the appropriate clauses.

If the work is clearly commercial in nature or you can’t convince the government that the work is R&D, we suggest you ask questions such as the following before proposing or accepting the agreement:

◆ Is the work specified under this PO appropriate for a research university?

◆ If you negotiate out a warranty clause, is there still an implied warranty as to usefulness toward purpose, form fit and function, and any adverse action associated with your contract?

◆ Do you normally sell this product or service to others; are you providing the
government with your best price (e.g. ‘most favored customer’ pricing)?

◆ Even if you don’t have a stated termination for default clause, will that prohibit the government terminating for default under adverse circumstances (e.g. failure to perform)?

◆ Are you capable of adsorbing re-performance or re-procurement costs if terminated for default since virtually all these contracts are priced on a fixed price basis?

◆ When does the Uniform Commercial Code become a factor?

What is the potential of complete success, partial success or, maybe your institution will just get lucky to complete the work on budget, on schedule and with completed deliverables? Most PIs are very optimistic even if the work is associated with a fixed price contract. But remember the worst possible outcome is debarment of the entire institution.

We think the above suggestions are a good cross section of questions that need to be asked prior to entering into any FAR 12 PO on a case by case basis. Each institution needs to develop its own risk analysis methods and processes. Just because a PI wants the work, the work will help towards your institution’s financial goals, or the institution wants the F&A return, should not be sole reasons for accepting the contract.

However, don’t try to “play the system.” For example, don’t negotiate R&D clauses when the procurement is clearly supplies or services. Doing this only manifests unprofessional behavior on your part. Negotiate the correct clause for the objective of the contract.

**Other Considerations Under a FAR 12 PO**

Are the terms “Performance-based Acquisition (PBA)” or “Performance Work Statement (PWS)” used in the PO (e.g. means an acquisition structured around the results to be achieved as opposed to the manner by which the work is to be performed / means a statement of work for performance-based acquisitions that describes the methods used to obtain the required results in clear, specific and objective terms with measurable milestones and outcomes, respectively)? If so, do you know what these terms mean and their hidden requirements as defined in the clause at 52.232-32, Performance-Based Payments. (Hint – if you do not meet pre-negotiated success criteria, you do not get paid and risk termination.)

Is your public university competing against industry or other nonprofits? Is this legal in your state? Will the federal government consider the issue of an uneven playing field? A university with a predetermined F&A rate supported by institutional resources and no profit incentive will probably have an unfair competitive advantage when competing with industry or even a nonprofit. Some states will not allow this type of competition because of economic policies prohibiting competition with industry. There is also an issue of ownership of intellectual property. If industry is competing, the government may assume that ownership of deliverables will pass to the government with no rights to the provider. Objections to a competitive
procurement based on these issues may result in an award protest by an unsuccess-
ful party with potential negative results such as: 1) termination of the contract with
the successful party; 2) significant delays in contract schedules; 3) a repeat of the
competitive process; or 4) cancellation of the procurement altogether.

“Document, document, document” is the cheer for the contract negotiator but,
in the case of federal commercial contracts, a memo to the file may not be enough to
negate an adverse action. However, the more each party has documented the inter-
actions between the parties, the easier the resolution if the contract is found to be insuffi-
cient in defining the relationship of the parties and the quid pro quo. If a memo
for the record is all you have, that may be sufficient, but it has to be more than a ‘feel
good’ memo written to appease those who will later review the contract.

Conclusion
We recommend that you:
(1) Attempt (starting at the proposal stage) to make the contract R&D;
(2) Do your homework and understand the requirements and implications of
accepting a FAR 12 PO; and
(3) Assure that proper clauses are negotiated for the nature of the procurement and
the contract type is clearly defined.

So, the ‘cat is now really out of the bag.’ Your job, if you choose to accept it, is to
keep the cat in the house. Accepting FAR 12 POs can be an acceptable practice pro-
vided your organization has fully considered the ramifications of going outside the
‘stated’ mission of the institution and is willing to accept the risk of federal commer-
cial contracting methods as a vehicle to increase your sponsored programs portfolio.

About the Authors
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shops and panels regarding the FAR.
This section includes guidance and tools — flowcharts, checklists, etc. — relating to administering research contracts. These materials are culled from a variety of authoritative sources.

**E-Verify Required Under Federal Contracts**

AIS editors

Use of the federal E-Verify system (www.dhs.gov/everify) will be required under most federal solicitations issued and contracts awarded, including research contracts. The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council amended the Federal Acquisition Regulation (FAR) to reflect this requirement in the Nov. 14, 2008, Federal Register. In the June 5 Federal Register, NASA, DoD and GSA agreed to delay the effective date of the requirement until Sept. 8, 2009 (http://edocket.access.gpo.gov/2009/pdf/E9-13124.pdf).

Through language inserted into a federal contract, contractors must agree to use E-Verify “to confirm the employment eligibility of all persons hired during a contract term and to confirm the employment eligibility of federal contractors’ current employees who perform contract services for the federal government within the United States.” E-Verify is administered by the Department of Homeland Security (DHS). The requirement is in addition to the required completion by employers of an Employment Eligibility Verification Form (Form I-9).

**Requirements Checklist**

✓ **Who:** In response to criticisms of the applicability and cost of the rule to higher education institutions, the final rule allows colleges and universities to verify only employees and new hires who are actually assigned to a federal. It remains to be seen whether this limitation on applicability will actually lessen the burden on institutions, as many institutions may find it difficult to institute different human resource practices for employees paid from federal contracts and those paid from other sources.

According to E-Verify’s FAQ for contractors, an employee assigned to the federal contract is defined as “any employee hired after November 6, 1986, who is directly performing work in the United States under a contract that includes the clause committing the contractor to use E-Verify. An employee is not considered to be directly performing work under the contract if the employee normally performs support work, such as indirect or overhead functions, and does not perform any substantial duties under the contract.” (See additional discussion of “employees” in Figure 2730.1-1.)

✓ **What:** The requirement affects most federal contracts awarded after Feb. 20, 2009. (There has been some confusion as to whether the requirement also applies to grants and cooperative agreements. The requirement does not appear to do so at this time.)
According to E-Verify’s FAQ for contractors, covered are

- Prime federal contracts with a period of performance longer than 120 days and a value above the $100,000 simplified acquisition threshold.
- Subcontractors if a prime contract includes the clause. For such subcontracts, the rule extends the E-Verify requirement to subcontracts for services or for construction with a value over $3,000.
- Employees working in the United States (currently defined to include the 50 states and the District of Columbia, Guam, Puerto Rico, and the U.S. Virgin Islands).
- Existing indefinite-delivery/indefinite-quantity contracts if modified by a contracting officer. Such contracts will be modified “on a bilateral basis in accordance with FAR 1.108(d)(3) to include the clause for future orders if the remaining period of performance extends at least six months after the final rule effective date and the amount of work or number of orders expected under the remaining performance period is substantial.”

The rule exempts contracts

- that include only commercially available off-the-shelf items (or minor modifications to such items) and related services;
- less than the $100,000 simplified acquisition threshold;
- of less than 120 days; and
- where all work is performed outside the United States.

**When**: When a contractor is awarded a federal contract that contains the E-Verify clause, the contractor and any covered subcontractors on the project are required to enroll in the E-Verify program within 30 calendar days of the contract or subcontract award date. A contractor has 90 calendar days from enrolling in the E-Verify system to begin using the system for new and existing employees.

**Where**: E-Verify is a free, Web-based tool used to verify the employment eligibility of employees and new hires. It is operated as a partnership between the DHS and the Social Security Administration (SSA), with oversight by the U.S. Citizenship and Immigration Services. According to E-Verify, the system electronically compares employee information taken from the Form I-9 (the paper-based employment eligibility verification form used for all new hires) against more than 425 million records in SSA’s database and more than 60 million records in DHS’ immigration databases.

**How**: Before you can start using E-Verify, you need to enroll in the program (at www.vis-dhs.com/employerregistration). At the end of the enrollment process, you will be required to sign a memorandum of understanding (MOU) that provides the
terms of agreement between your institution and DHS. According to the E-Verify Web site, if you have already enrolled in E-Verify and you are awarded a federal contract after the effective date of this requirement, you may need to update your profile once the contract has been awarded. According to E-Verify, your subcontractor cannot verify under your MOU but must separately enroll in the system.

According to E-Verify’s FAQ for contractors, contractors are prohibited from using E-Verify prior to a job offer and acceptance by the applicant. Also, you are required to post the notice provided by DHS indicating your participation in the E-Verify program as well as the anti-discrimination notice issued by the Office of Special Counsel for Immigration-Related Unfair Employment Practices at the Department of Justice.

✓ Why: The new FAR rule implements Executive Order 12989, as amended by President Bush on June 6, 2008, directing federal agencies to require that federal contractors agree to electronically verify the employment eligibility of their employees.

Figure 2730.1-1: Employees Required to Be Verified

The following are excerpts from “Frequently Asked Questions: Federal Contractors and E-Verify” located at www.dhs.gov/everify.

My employee is working on a contract for a minimal amount of time. Is he or she subject to E-Verify? Yes. The rule does not exempt employees based on the intermittent nature of the work or the length of time spent performing the work.

What employees are not considered to be directly performing work under a contract and therefore excluded? Those employees who normally perform support work, such as indirect or overhead functions, and do not perform any substantial duties applicable to the contract, would be excluded.

One of my employees was run through E-Verify by a previous employer. Do I need to run this employee through E-Verify again? Yes. Under the rule, federal contractors are required to enter the worker’s identity and employment eligibility information into the E-Verify system following completion of the Form I-9 at the time of hire.

My employee has been previously confirmed as work authorized through E-Verify but is moving to another contract. Do I need to run him or her through E-Verify again? No. Once an employee has been run through E-Verify and employment authorization has been confirmed, the employee should not be re-verified through E-Verify again by the same employer.

Are there any exceptions to verify employees with certain credentials and security clearances? Yes. The federal contractor is not required to perform employment verification using E-Verify for any employee who has been granted and holds an active federal agency HSPD-12 compliant credential or a U.S. Government security clearance for access to confidential, secret, or top secret information in accordance with the National Industrial Security Program Operating Manual. The employer still must complete the Form I-9 at the time of hire for such employees.
The Q&As at ¶2790.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 2700 has been understood. Note: For the answer key for ¶2790.1, see ¶2790.3, which appears on a separate page (page 2790:5) for testing purposes.

Discussion topics at ¶2790.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶2790.1 Q&As

1. The federal government typically uses contracts for the purpose of
   (a) Acquiring goods and services for the direct benefit of or use by the U.S. government
   (b) Stimulating basic R&D
   (c) Funding postdoctoral work
   (d) Providing proposal incentives to faculty

2. Which of the following terms generally is NOT used in reference to a contract?
   (a) Proposal
   (b) Bid
   (c) Application
   (d) Offer

3. To be considered binding, a contract must have the following essential characteristics EXCEPT:
   (a) The parties to the contract must be competent to enter into the agreement.
   (b) There must be consideration (something of value) given to the party making the promises by the party receiving the promises.
   (c) There must be mutuality of agreement and mutuality of obligation.
   (d) An end date within 90 days of the start date must be explicitly stated in the contract.

4. An institution may be required to submit a “subcontracting plan” if the federal contract proposal reaches what threshold?
   (a) $500,000
   (b) $300,000
(c) $1,000,000
(d) A subcontracting plan is always required regardless of contract’s dollar amount.

5. **All of the following are true with respect to the Federal Acquisition Regulations EXCEPT:**
   (a) Each chapter of the FAR is divided into “parts.”
   (b) It represents the policy and procedure manual for federal contract officers on how to construct a federal contract.
   (c) The titles of each part are not consistent across all chapters.
   (d) Each part of a chapter addresses a particular procurement topic (termination, intellectual property, inspection, property management, etc.).

6. **Submitting exceptions to proposed contract terms along with a contract proposal often is considered**
   (a) A breach of business ethics
   (b) A breach of faith
   (c) An overly burdensome delaying tactic
   (d) Part of the normal contracting process

7. **What types of contracts are based on expenditures, where the contractor typically submits invoices for payment?**
   (a) Fixed-price contracts
   (b) Sole-source contracts
   (c) Cost-reimbursable contracts
   (d) None of the above

8. **Expanded authorities that provide certain flexibility to award terms**
   (a) Apply only with respect to NSF contracts
   (b) Apply only with respect to Department of Defense contracts
   (c) Do not apply to federal contracts
   (d) Apply only with respect to NIH contracts
1. What is the difference between a "grant" and a "contract"? How can you determine under which type of agreement you are operating?

2. What does it mean to "negotiate" a contract? What types or provisions are usually "negotiable" in contracts entered into by your institution? What types of provisions are generally non-negotiable?

3. If an institution objects to a specific term or condition under a federal contract, does any recourse exist for obtaining a modification or elimination of that term or condition or should an institution just "walk away"?

4. What internal system(s) exists at your institution for tracking and monitoring contracts and subcontracts? Are these effective in your opinion?

5. What does it mean for a contract to "go bad"? What procedures are in place at your institution to (1) forestall this from happening, and (2) react if it can't be avoided?

6. Why is it critical that the PI be properly informed about the specifics of a contract throughout its conduct? How can this be done most effectively at your institution?

7. What are your record retention policies for contract-related documents? How are the policies derived? How are they communicated to staff responsible for compliance with the policies? Does the policy address both electronic and paper records?

8. There are new requirements coming into effect relating to the creation of a contractor integrity and performance database. Are you familiar with these requirements? Do they apply to your institution? In general, how do you stay up-to-date on new requirements affecting federal contractors?

9. How does your institution protect against conflict of interest in its contracting practices? Who is in charge of ensuring that no conflicts exist?

10. Do you look for different skill set when hiring a person to perform contract negotiations and oversight versus grants administration? If yes, how do each set of skills differ?

11. Who oversees creation and execute of a material transfer agreement that may be necessary under a contract or subcontract at your institution?
2790.3 Answer Key

Following are the correct answers to the questions included at ¶2790.1.

1. (a) Acquiring goods and services for the direct benefit of or use by the U.S. government
2. (c) Application
3. (d) An end date within 90 days of the start date must be explicitly stated in the contract.
4. (a) $500,000
5. (c) The titles of each part are not consistent across all chapters.
6. (d) Part of the normal contracting process
7. (c) Cost-reimbursable contracts
8. (c) Do not apply to federal contracts
PLACE TAB

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Legal Considerations
Chapter 2900
Legal Considerations & Facilitating Sponsored Research

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Introduction

John M. Carfora, Ed.D.
Associate Provost for Research Advancement & Compliance
Loyola Marymount University

This chapter, written by James Casey, JD, is an update of the prior version authored by Kathleen Irwin, JD. Here, Mr. Casey adds his own unique stamp to legal considerations in the area of sponsored research.

A central theme Casey brings out in this chapter is that lawyers provide advice and counsel to sponsored research professionals, leaving the business decisions that support research (or not) to be made by sponsored research professionals and/or university leadership. In a very clear way, then, university attorneys are a support unit to research administration professionals and university leadership. As Casey correctly says in his introduction: *there are attorneys that find reasons to say “yes,” and then there are attorneys that find reasons to say “no.”* An accomplished research administrator himself, Casey falls into the former category. This framework finds expression in part of the chapter’s title: *facilitating sponsored research,* which in turn reflects an important viewpoint in the current climate of highly competitive funding streams, populated in large part by colleges, universities and other entities (non-profit and profit in nature).

Completely new additions to this chapter are the sections on the Uniform Guidance (UG) and international research administration. The former is of relatively recent origin, taking effect on December 26, 2014, while the latter has been growing precipitously over the past decade. While the UG is still being implemented at a number of universities and certain aspects of it are still in the process of being clarified by the Office of Management and Budget in collaboration with the higher education community, the international domain provides a truly exciting cross-cultural context for international research collaboration and management to effectively move forward in that realm.

In sum, the purposefulness of this chapter is to introduce the reader to the context of legal considerations and how the latter fits into the world of sponsored research. Indeed, the sponsored research professional will find this chapter to be of great value in better understanding how much of our work encompasses critical legal dimensions. While the field of research administration will change, as it always has, in the coming years, it is important to remember that the law is often “more measured” within the framework of continuity and change. Thus, while research administration will no doubt further evolve with time, the common law basis for much of American jurisprudence – which finds its way into the statutes and regulations impacting research and research administration – will not rapidly change any time soon. For the research administrator, this means they will need to continue to meaningfully navigate two interconnected fields; most definitely, where law and research administration intersect.

This chapter will respond to changes in the legal environment of research administration and the information needs of research managers over time through the addition of new material.
At its very essence, the world of sponsored research has a direct and integral connection with the law and legal documents. The sponsored research ecosystem is supported by legal documents of one form or another. These legal documents may be called grants, contracts, cooperative agreements, sponsored research agreements, other transactions, or whatever the sponsor wishes to call them (though one should always look at the substance of the agreement rather than just the title to ascertain its exact nature). As long as the document conforms to certain formalities, those agreements are legal documents that confer upon the parties to the document obligations and responsibilities.

As an attorney and research administrator for over twenty years, I often like to say that there are two types of attorneys in the sponsored research world: those that find a reason to say “yes” and those that find a reason to say “no.” While I am certainly in agreement that all laws, rules, and regulations, etc., need to be followed, I am also one of those attorneys & research administrators who find a reason to say “yes” as much as possible. For instance, in the area of approving grant applications for submission to external sponsors, it has been extremely rare (less than a dozen times) over 20 years that I’ve said no to a proposal – and when I’ve said no, it is always in consultation and concurrence with other university leaders.

Attorneys in higher education should facilitate as much as possible. And, it is important to note, that universities have different comfort levels with risk and how to mitigate or eliminate such risk. Being overly conservative in terms of eliminating all sponsored research risk – which I think is impossible in many cases except in not pursuing sponsored research – will serve as a disincentive to grow sponsored research at many institutions. That has significant academic implications.

Certain types of legal activities must be conducted under the direction of an attorney licensed to practice law in the jurisdiction; for example, representing a client in a court of law. However, even though sponsored research agreements are legal documents, one doesn’t have to be an attorney to write one, to negotiate one, or to sign one. If you are an attorney by training but your university role is serving as a research administrator, be careful to not give the wrong impression by holding yourself out as a university attorney.

What use are attorneys in the sponsored research world? Why would a research administrator want to let an attorney in on the process? And, if the decision is made to let one become involved, what is his or her role?

This chapter attempts to answer these questions and looks at the ways legal counsel is provided to institutions. It discusses types of laws relating to sponsored
research and examines specific legal constraints that impact a sponsored research agreement. The chapter identifies various types of legal considerations and explains their significance to sponsored research activity, and addresses the new Uniform Guidance and gives due attention to the important area of international research management. Discussing the differences and interplay between federal grants and contracts and industrial funding of research rounds out the chapter. These areas are very complex, so what you will read here is a broad context of these different areas.

By considering these discrete legal dimensions and providing a broader context of the law for sponsored research professionals, it is hoped that all sponsored research professionals will have a better understanding of how attorneys can serve in a variety of roles in the sponsored research ecosystem.

**2905.1 Common Models for Providing Legal Counsel to Institutions**

Any research administrator who needs to interact with legal counsel needs to know whether the institution has in-house counsel and what the protocol is for engaging said counsel. It is also important to know whether or not university counsel has a level of expertise in laws relating to sponsored research or if the research administrator should be prepared to “catch ‘em young and raise ‘em right.”

**In-House Versus Outside Counsel**

Until more recently, most universities retained outside counsel from local or national law firms to provide advice when legal issues arose. In the past several decades, as institutions of higher education have become more complex, large universities now employ one or more attorneys full time as so-called “in-house” attorneys or counsel.

An advantage to using in-house counsel is that the attorney becomes familiar with the culture and organization of the particular institution and can interact with the appropriate decision makers to identify the best position for the university in a particular situation. A disadvantage of in-house counsel is that the legal issues arising at universities are increasingly complex and specialized. Many institutions respond to this challenge by either employing attorneys who specialize in certain major areas — such as intellectual property, tax, purchasing, export controls, and environmental matters — or by maintaining a relationship with a large private firm that can advise in-house counsel in specialized areas.

**Open-Door Versus Closed-Door Policy**

In general, use of outside counsel requires authorization from someone within the institution. With in-house counsel (often called “general counsel, associate general counsel, or assistant general counsel,” and the “Office of General Counsel”), the office may be either a so-called closed-door or open-door operation. Having an open-door policy means that anyone within the institution may contact legal counsel seeking advice about an institutional matter. Only certain individuals within an organization may contact or authorize contact with legal counsel in a closed-door system. The advantage to an open-door office is that generally legal issues come to
the attention of counsel before they become critical. The disadvantage is that legal
counsel must be able to identify matters that are not institutional issues and gently
reject matters that are not truly legal issues or may not be of sufficient importance to
merit the commitment of a relatively scarce resource — legal firepower.

**Sponsored Research Issues**

Until the 1990s, there were few university counsel who specialized in sponsored
research issues, so it was often difficult for the sponsored research administrator to
benefit from legal advice. This, in part, was because the “law” relating to sponsored
research was not something with which most attorneys were familiar. The basis of
the law was scattered among a variety of statutes, regulations, agency documents,
and institutional policies, and, frankly, scared many attorneys to death. There was
no one treatise or hornbook that would teach attorneys everything they needed to
know to competently practice in the area.

Further, in the past, the legal office and institution may not have recognized the
benefit of asking an attorney to invest the substantial time necessary to specialize in
sponsored research issues. That has changed as major research institutions began to
recognize that sponsored research is a major area of potential liability. Attorneys be-
gan to realize that sponsored research is an interesting practice area with challeng-
ing issues, and especially as skilled research administrators were willing to invest
the time to help demystify the area for legal counsel. While the law remains scat-
tered, the combination of a recognition that the research enterprise is a major com-
ponent of the business of many institutions and the willingness of research adminis-
trators to educate legal counsel is beginning to yield a growing number of attorneys
who consider themselves knowledgeable in the area of sponsored research, if not
experts.

For those attorneys fortunate enough to have made this leap, the rewards are
great:
◆ The opportunity to interact with the sponsored research staff in educational
activities.
◆ Appreciate the nuances of the law and institutional policies.
◆ The opportunity to engage with staff in complex negotiations.
◆ The opportunity to participate in policy and process development to make the
sponsored research enterprise better and more vibrant.

These interactions lead to better agreements, more skillful negotiators, and less
adversarial activity. When the process breaks down and leads to legal action, wheth-
er in court or with a funding agency, the attorney can repay the sponsored research
staff by providing a calm and steady hand in the matter.

**12905.2 Overview of the Law of Sponsored Research**

The “law” of sponsored research is a combination of constitutional law, statutes and
regulations, case law, guidance documents, and industry practice. For example, copy-
rights and patents — both important to sponsored research activity — have their foundation in the U.S. Constitution. Many of the laws discussed in this chapter, such as the Bayh-Dole Act, are found in federal statutes and implementing federal regulations. In the area of intellectual property (IP), the more recent America Invents Act informs that specialized area. Case law, law created by courts interpreting cases/controversies, statutes, and documents, is the main source of contract law. Many federal funding agencies have issued voluminous guidance documents and policy manuals relating to sponsored research, and, of course, every institution has its own policies and guidance that often reflect the general practice of the higher education community.

Sources of ‘Law’

The U.S. Constitution, statutes, regulations, and case law create legal rights and obligations. These form a hierarchy of law, with the Constitution prevailing over a statute, which in turn prevails over a regulation. In fact, regulations are often required by the enabling (original) statute in order to provide additional guidance. Case law is law that is developed through the courts either to provide interpretation of the constitution, a statute, or a regulation or to govern relationships that are not addressed by those more formal documents. Case law is also known as common law, where the doctrine of precedent (also known as stare decisis) is paramount. For example, most law relating to clauses in sponsored research agreements arises from the common law.

Industry practice, in this case the normal presumptions that are common to higher education, may serve to provide guidance in interpreting a contract in the absence of other more formal legal documents but are not necessarily legally binding on a court.

Federal guidance documents, as discussed below, may or may not take on a legal aura (see section 2905.8). If the guidance document is couched in such a manner that it becomes a term and condition of the agreement, then it has binding legal significance. Examples of these would be the Uniform Guidance (OMB) and the NIH Grants Policy Statement. Other such documents may function more to define industry practice. Institutional policies may be useful in defining industry practice or may have significance only within the institution.

Key Requirements

There are specific requirements that have a substantial impact on the research enterprise. Some, though not all, of these areas are covered in the sections to follow. Given that this chapter gives the broad context of legal considerations of sponsored research, the reader is invited to seek out information for those sections not covered below:

◆ Funding mechanism
◆ Ownership of federally funded inventions
◆ Facilities financed with tax-exempt bonds
◆ Unrelated business income
Export controls
Federal contracting regulations
Grants administration circulars
Agency-specific grants policy manuals and guidance documents
Institutional policies
Issues in the global and industry sponsored research realms

12905.3 Laws Governing Types of Federal Funding Agreements

The primary statute governing what funding mechanism is used by a federal agency is the Federal Grant and Cooperative Agreement Act.1 The provisions of this law apply to most federal procurement contracts, grants, and cooperative agreements including those with universities.

Major Types of Agreements

The purpose of the act is to make the selection of the type of funding agreement uniform across agencies. An agency’s decision regarding the type of funding agreement used may be appealed, but opinions from the Comptroller General, the office that would hear such an appeal, indicate that the agency’s decision will not be questioned lightly. Nonetheless, it is sometimes possible to negotiate the mechanism with a contracting officer who is attempting to use a contract when the scope of work is more consistent with a grant — especially if the work was begun under a grant and there is nothing to support the decision to change to a procurement contract. Thus it is useful to know what the primary determinants are for use of the three major types of funding agreements:

Procurement contract: A procurement contract is used when the purpose is to acquire property or services for the direct benefit or use of the government. However, the law provides that it is also appropriate to use a procurement contract when the agency decides that its use is appropriate in a specific instance. The decision to use a procurement contract even when the purpose is not to acquire property or services may be driven by the funding source available or may be a personal preference of the federal officer in charge of the contract.

Grant agreement: A grant is appropriate when the purpose is to support or stimulate the carrying out of a public purpose, is not to acquire property or services for the direct benefit or use of the government, and there will not be substantial involvement between the recipient and the federal agency in carrying out the activity. Because the terms and conditions of a grant are much more flexible than those required for a federal contract, grants are the preferred type of award for university research.

1 Federal Grant and Cooperative Agreement Act, 31 USC 6301. In addition, specific agencies have explicit authority to enter into grants and cooperative agreements. See, for example, 15 USC 1540, “Cooperative Agreements” (Department of Commerce). The U.S Code is available online at www.law.cornell.edu/uscode.
Cooperative agreement: The research activity under a cooperative agreement is similar to that of a grant, but with a cooperative agreement there is substantial involvement between the recipient and the federal agency. The National Institutes of Health (NIH) defines cooperative agreements to be: “A support mechanism that will have substantial Federal scientific and/or programmatic involvement. Substantial programmatic involvement means that after award, scientific or program staff will assist, guide, coordinate, or participate in programmatic activities beyond the normal stewardship responsibility in the administration of grants .......”

Other Funding Agreements, Programs

Although the vast majority of funding agreements between the federal government and colleges and universities are grants, contracts, and cooperative agreements, other funding mechanisms are used.

Cooperative Research and Development Agreements (CRADAs)

Increasing interest in the use of CRADAs was, in part, a reaction to the end of the Cold War and government concerns over the fate of the national laboratories. A CRADA is an agreement between a federal laboratory and a nonfederal partner, which may be an educational institution. Los Alamos and Sandia are examples of federal (national) laboratories. The laboratories may be either federally operated or may be government owned and contractor operated, known as GOCOs. The collaborating, nonfederal partner agrees to provide funds, personnel, services, facilities, equipment, or other resources needed to conduct a specific research or development effort, while the federal government agrees to provide similar in-kind resources but not funds. While historically CRADAs didn’t provide federal funds to partner institutions, more recently the author has seen some instances where the Federal Government provided funds to cover costs at the partner institution.

The government may agree to protect any proprietary information brought to the CRADA effort by the other partner, and, if the government partner so chooses, allow the government and the collaborating partner to share patents and patent licenses or may permit one partner to retain exclusive rights to a patent or patent license.

Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs

University research may also be funded under the SBIR or STTR programs. These programs set aside a certain amount of the budget of several agencies for research to strengthen the role of small business and increase the commercial application of innovations derived from federally funded research. A primary difference between

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2 15 USC 3710a, “Cooperative Research and Development Agreements.”
3 Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs were established at 15 USC 631. See www.sba.gov/sbir/indexsbir-sttr.html. In addition, participating agencies may have applicable regulations.
the programs is that under the STTR program, researchers at universities or other research institutions must play a significant intellectual role in the conduct of the research. Not less than 40 percent of the work conducted under an STTR award must be performed by the small business concern, and not less than 30 percent of the work must be performed by the nonprofit research institution. For SBIR grants, university participation is not required and tends to be in a consulting or subcontracting role. SBIR and STTR grants may create some interesting situations for universities. Both are common methods of support for faculty start-ups.

Often, under one of the programs, the faculty start-up company wants to contract further research work to the faculty’s laboratory at the institution — leading to a conflict of interest that the institution must address. Research administrators should note, however, that SBIR and STTR grants are specifically excluded from the federal provision governing faculty and staff disclosures of outside interest. In addition, both programs are intended to encourage commercial development of the products of federally sponsored research by the small business. This often leads to the mistaken assumption that any inventions by university researchers vests in the small business. This is incorrect; the provisions of Bayh-Dole apply to the awards and the university has the first right to take title to any invention by its faculty or staff (See discussion of Bayh-Dole in section 2905.4.). Another interesting wrinkle is this: At the STTR Phase I stage, an IP sharing agreement must be agreed to between the parties by the time the project starts.

As some small businesses are often beginners in the SBIR/STTR world, it is important to make sure that the small business understands the IP dimensions of these programs and is given an opportunity to have access to any such invention. For universities working with small businesses, it is critically important to have substantive discussions on IP, programmatic, and ancillary issues at the proposal submission stage. More discussion up front should lead to less work and problems on the back end.

**Transactions Other than Contracts and Grants**

Certain agencies, notably the Department of Defense and more recently the Department of Homeland Security, are authorized to enter into “other transactions.” The authority is given explicitly in addition to the authority to enter into contracts, grants, and cooperative agreements. These “other transactions” are relatively rare types of agreements. It is clear, however, that the federal funding sources that have authority to use them take the position that none of the other rules, regulations, and policies that have grown up around contracts, grants, and cooperative agreements apply to “other transactions.” The institution may attempt to negotiate clauses with the funding agency that more closely resemble the clauses typically used, but the agency is not bound to accept those clauses and may walk away. For example, the institution can attempt to negotiate for ownership of inventions, but the agency is not bound by the provisions of the Bayh-Dole Act (discussed below) and may insist on some other disposition of ownership as a condition for making the award.

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4 10 USC 2371, “Research Projects: Transactions Other than Contracts and Grants.”
¶2905.4 Some Major Federal Statutes and Regulations Governing Sponsored Research

Each of the laws discussed in this section is extremely complex. Failure to conform to the requirements of these laws or other laws in other chapters of this book (such as in the area of export controls), can lead to institutional and individual criminal penalties, civil penalties, and other serious consequences. Research administrators, therefore, should work closely with legal counsel to determine the impact of these laws and their implementing regulations on the types of research conducted on campus.

Ownership of Federally Funded Inventions

The Bayh-Dole Act, regulating ownership of federally funded inventions, initially became law in 1980. The act, arguably one of the most influential pieces of legislation relating to the research enterprise, establishes a uniform policy for all federal agencies for inventions conceived or reduced to practice under grants or contracts to universities and provides that the university has the first right to elect title to such inventions.

By providing certainty regarding ownership of and title to university inventions arising from federal funding, the act was a watershed provision for university technology transfer offices and encouraged significant increases in the amount of industrial sponsorship of scope-of-work research at universities. As used in this discussion, scope-of-work research is that research in which the goals and objectives of a specific research activity are specified as part of the agreement (in contrast to research conducted under a gift or unrestricted contribution wherein the researcher is free to use the money to accomplish research within a general category at the discretion of the researcher). The goals of Bayh-Dole are identified in the act’s statement of purpose as being to

◆ “use the patent system to promote the utilization of inventions arising from federally supported research or development;

◆ promote collaboration between commercial concerns and nonprofit organizations, including universities; and

◆ promote the commercialization and public availability of inventions made in the United States by United States industry and labor.”

The act provides that a university may retain the patent rights to an invention that is conceived or first reduced to practice in the performance of a federally funded contract, research grant, or cooperative agreement, provided (among other things) that the institution

◆ discloses the invention to the funding agency within a reasonable time after it becomes known to the university;

◆ files with the funding agency a written election to take title to the patent within two years of disclosure to the funding agency and prior to the expiration of any statutory patent filing period;

5 35 USC 200. Regulations implementing the Bayh-Dole provisions are at 37 CFR 401.
◆ shares royalties with the inventor; and
◆ devotes any net revenue from the invention to the support of scientific research or education.

Since the majority of institutional research funding is from federal agencies, the provisions of Bayh-Dole may affect what can be provided to an industrial sponsor of research (see section 2905.10). Certain provisions of the act have direct implications for what may be offered to an industrial sponsor of research, as follows:
◆ If the university declines to take title to the subject invention or fails to follow the provisions of the act, the funding agency may elect to take title to the patent or may agree to vest title in the inventor.
◆ The institution may not unilaterally assign its domestic rights to the invention to anyone except an entity that specializes in the management of inventions.
◆ Research projects entirely funded by a nongovernmental sponsor are exempt from Bayh-Dole but if the invention is funded in part by a federal grant, the act applies. Bayh-Dole’s implementing regulations provide, however, that “[t]o the extent that a non-government sponsor established a project which, although closely related, falls outside the planned and committed activities of a government-funded project and does not diminish or distract from the performance of such activities, inventions made in performance of the non-government sponsored project would not be subject to the” act. Mere use of equipment purchased with federal funds is not sufficient to trigger the provisions of the act.

America Invents Act (2012)
As previously mentioned, the Leahy – Smith America Invents Act, effective September 16, 2012, is the most recent major piece of intellectual property legislation in the United States. Much has been written on this statute over the past 3+ years, so there is a plethora of material for the reader of this chapter.

Unrelated Business Income
In general, income received by a nonprofit institution is not subject to income tax unless it is found to be unrelated business income (UBI). The regulations governing UBI apply to all universities regardless of whether or not the institution takes its tax exemption under Section 501 of the IRC or under the provision relating to income

Reminder

The purpose of the Bayh-Dole Act is:
◆ To promote the use of inventions arising from federally supported research
◆ To promote collaboration between commercial concerns and nonprofit institutions
◆ To ensure that inventions are used to promote free competition and enterprise
of states and their agencies. There is a specific exclusion for income from research. The IRS, however, clearly believes that certain activities that a university might term research, are not research. The further down the line from basic research towards applied research a program is, the more likely that an IRS auditor will find that the payment the institution received for performance of the research is UBI and therefore taxable.

Example

As is the case with tax-exempt bonds, the university exemption from income tax is not popular with the IRS due to past abuses of the exemption. For example, an institution once received a gift of a macaroni factory, proceeded to carry on with the business, and was not required to pay taxes on the income it received from selling the macaroni. The IRS didn’t like this, other macaroni manufacturers didn’t like this, and eventually Congress didn’t like this (and passed legislation taxing unrelated business income). One of the most vocal critics of the exemption for income from research is the contract research organizations that argue that university clinical trial work is no different than the services they provide, and yet they have to pay taxes on the income received and universities don’t.

Export Controls

Federal laws regulating the export of goods and services are not new – existing in some form since the 1940s. They are a significant concern for many universities, but especially for major research universities with significant STEM research imprints and international activities (whether academic or research in nature).

Recent events have raised sensitivities relating to the internal security of the United States, proliferation of weapons of mass destruction, and increasing international competition. As a result, enforcement of export control laws has taken on a new vigor. For a full discussion of export controls, see Chapter 3400.

¶2905.5 The Uniform Guidance (2014)

The Uniform Guidance (UG), formally entitled Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, and located at 2 CFR 200, supercedes the three previous OMB Circulars most applicable to institutions of higher education (A-21, A-110, A-133, see Section 2920.3 for a further discussion of these). This is a new grants management architecture that, quite honestly, is anything but “uniform.” The effective date of the UG was December 26, 2014, though clarifications to it started almost as soon as the ink was dry on the legislation and

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6 26 USC 512, “Unrelated Business Taxable Income.” See especially §512(7) and §512(8).
7 Export Controls and Universities: Information and Case Studies, Council on Governmental Relations, 2003, www.cogr.edu/docs/export%20controls.pdf. This is a very good discussion of the various export control laws and includes case studies and a list of resources, including Web sites, from various universities that have invested substantial effort in analyzing and applying the export control laws to sponsored research.
continues to this day. This is one significant area where research administrators need to be vigilant in terms of changes.

For purposes of this chapter, the following provisions are pointed out to the reader given the contextual – nature of this chapter. These provisions are either: 1) heavily driven by jurisprudence; 2) cover some of the more controversial issues at the present time; or 3) point out more of the architectural or policy nature of the Uniform Guidance. Given that this listing is somewhat arbitrary, the reader is well advised to read the pertinent provisions that impact his or her work as a research administrator.

200.1 Definitions
200.22 Contract
200.24 Cooperative Agreement
200.56 Indirect (Facilities & Administrative (F&A)) Costs
200.67 Micro-Purchase
200.70 Nonprofit Organization
200.87 Research and Development (R&D)
200.88 Simplified Acquisition Threshold
200.95 Termination
200.103 Authorities
200.111 English Language
200.203 Notices of Funding Opportunities
200.300 Statutory and National Policy Requirements
200.303 Internal Controls
200.330 Subrecipient and Contractor Determinations
200.338 Remedies for Noncompliance
200.339 Termination
200.340 Notification of Termination Requirement
200.341 Opportunities to Object, Hearings and Appeals
200.342 Effects of Suspension and Termination
200.400 Policy Guide
200.448 Intellectual Property
200.450 Lobbying
200.468 Specialized Service Facilities
200.470 Taxes (Including Value Added Tax)
200.501 Audit Requirements

12905.6 Legal Dimensions at the International Level

The legal dimensions of “international” research, research occurring in different
countries, is one of the most fascinating aspects of research administration. The development of jurisprudence across the globe, coupled with a variety of legal agreements between national, bilateral, multilateral and global organizations (like the United Nations), illustrates perfectly on one level the increasing closeness of countries. While some may argue that we are moving to a day where borders will not exist, current legal, political, social, and cultural events indicate that such a day may be much farther in the future than predicted.

Some of the more important dimensions of international research are on the practical, operational side. Areas such as project management, language, taxation, human resources (hiring and letting go, in particular), safety/security, risk management, and local licenses and permits are highly important in ensuring that projects taking place outside your country occur with a minimum of delay and controversy. Large universities with significant international activities, like Harvard University, have the resources to bring all these areas together in a coordinated fashion, but not all schools are in that position. And, as you probably know, some universities, such as Northwestern University, have campuses operating outside the U.S. Those situations bring legal considerations to an even higher level.

The negotiation of international contracts is a wholly separate, and important, topic that is deserving of its own chapter.

While technically not a legal subject, the role of culture in the international context has a significant bearing on how law is conceived, viewed, and implemented in foreign countries. The Government – University – Industry Research Roundtable (GUIRR) – a subunit of the National Academies – convened workshops in 2010 and 2013 to discuss discrete issues in international research (2010) and then focusing on culture specifically and as it applied to specialized areas (2013). While there is much to commend in American or Western jurisprudence, research, democracy, and culture, it is best to show principles of collegiality, collaboration, and humility when dealing with non–American, non–Western partners in forging long–term relationships.

It is often helpful to consider the topics at professional association meetings to gauge what is going on in a particular area. For the purposes of this chapter, it is useful to consider the topics covered at the American Bar Association (ABA) Section of International Law Spring Meeting in New York City on April 12–15, 2016. The list of conference topics that touched upon international research is telling:

◆ Managing Risk Through the Headlines: General Counsel in News Media

◆ Foreign Law Firms: Is there Something to get Excited About?

◆ How to Avoid Suspension and Debarment: A Potent Government Consumer Remedy and Serious Consequences for Corporations and Individuals

◆ Proof of Foreign Law – A Comparison of the Approaches in the U.S. Courts and

8 http://www.nap.edu/catalog/13192/examining-core-elements-of-international-research-collaboration-summary-of-a

9 http://www.nap.edu/catalog/18849/culture-matters-international-research-collaboration-in-a-changing-world-summary
in International Arbitration
◆ Copyright Reform: Continents Collide?!
◆ Agreed, Vereinbart, Acuerdo – Cross Cultural Negotiation
◆ Future Forward: Change, Transformation, and the Mid-Career Lawyer
◆ Public – Private Partnerships in Infrastructure Projects
◆ The Practice of Foreign Law in the U.S.: Opportunities and Challenges
◆ What Does IP Have to do with Investor State Arbitration?

As the reader can see from this listing, legal considerations become more complex when the overlay of the international dimension is introduced. Skills of collaboration and collegiality are as important, if not more important, when it comes to international – as opposed to domestic – research projects. This also illustrates the point that interpersonal skills are just as important as technical skills in research administration.

¶2905.7 Federal Contract and Grants Administration Requirements

There are a variety of other requirements that are applicable to federally sponsored research. Some are applicable to specific types of agreements and some are agency specific. Some are easy to read and follow; some are so complex they produce severe headaches. Key requirements are discussed below.

Federal Acquisition Regulation

Reading the Federal Acquisition Regulation (the FAR) produces extremely severe, though not permanent, headaches. Since 1984 the FAR applies to all procurement contracts entered into by federal agencies, but it is not applicable to grants, cooperative agreements, or CRADAs. The FAR applicable to all federal agencies is issued jointly by the Government Accountability Office (GAO), the Department of Defense (DoD), and the National Aeronautics and Space Administration (NASA). Federal agencies are authorized to promulgate agency-specific acquisition regulations to “implement or supplement the FAR.”

Supplementary material is issued when there is no counterpart in the FAR sufficient for the “specific needs of the agency.” For a full discussion of the FAR, see Chapter 2700.

¶2905.8 Federal Grant Policy Manuals and Guidance Documents

While not considered “law” to the same extent as statutes and administrative regulations issued in the Code of Federal Regulations (CFR), federal granting agencies have the ability to issue policies of general applicability. These include the equivalent of grant “terms and conditions.” If, for example, a research administrator has a question about rights in data produced under a federal grant, the most likely place to find the answer is in the grant policy of that funding agency. Similarly, federal granting agencies may issue guidance documents that are meant to serve as additional
information and counsel to the awardee/university community.

This section is meant as a brief introduction to the area of policy and guidance by illustrating several examples. The reader is encouraged to seek out specific federal agency policy and guidance, whether that is in the CFR and/or in specific agency publications.

**Grant Policy Manuals**

Policy manuals may constitute terms and conditions of grants. For example, the *NIH Grants Policy Statement* (NIHGPS), revised November 2015, specifically provides that it “is intended to make available to NIH recipients, in a single document, the policy requirements that serve as the terms and conditions of NIH grant awards.” Other manuals, such as the *NSF Proposal & Award Policies & Procedures Guide* (PAPPG, effective January 25, 2016), do not provide that specificity (NSF Grant General Conditions are the other component), but at the least serve as an authoritative statement of the agency’s overall positions and requirements.

**Guidance Documents**

Agencies produce documents that cover specific issues and such documents provide a great deal of information and guidance to the research community. While it is unclear as to the legal status of some of the guides, it is clear that the agencies use them as a bully pulpit, and an institution that routinely ignores the guidance puts its relationship with the agency in peril. In some situations, the guidance is a requirement for agency support and in those cases, the guidance document clearly applies.

The NIH is particularly fond of guidance documents and it is worthwhile noting several, as they provide good insights regarding agreements with other sponsors of research or providers of research materials.

◆ “Principles and Guidelines for Recipients of NIH Research Grants and Contracts on Obtaining and Disseminating Biomedical Research Resources: Final Notice”:12

The guidelines provide recipients of NIH funding with guidance concerning appropriate terms for disseminating and acquiring “unique research resources” developed with federal funds. The term unique research resource is “used in its broadest sense to embrace the full range of tools that scientists use in the laboratory, including cell lines, monoclonal antibodies, reagents, animal models, growth factors, combinatorial chemistry and DNA libraries, clones and cloning tools (such as polymerase chain reaction or PCR, a tool for making copies of a gene to allow analysis), methods, laboratory equipment, and machines. The terms “research tools” and “materials” are used throughout this document interchangeably with “unique research resources.” Databases and materials subject to copyright, such as software, are also research tools in many contexts. Although the information provided here may be applicable to such resources, the NIH recognizes that databases and software “present unique questions that cannot be fully explored in this document.”

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This area ties into the ancillary discussion of Material Transfer Agreements (MTA) and letter agreements under the Uniform Biological Material Transfer Agreement (UBMTA) regime. This area implicates issues of safe transmission of biological materials, nondisclosure agreements, and intellectual property, and the research administrator working in this realm is well advised to thoroughly consider these dimensions.

◆ “Developing Sponsored Research Agreements: Considerations for Recipients of NIH Research Grants and Contracts”\(^{13}\) As is often the case, this guide was issued as an agency response to congressional concern over a particular agreement between an industry and a research institution that in return for funding gave the industry a first opportunity to license much of the intellectual property generated at the institution. The guide’s purpose is to provide institutions with issues and points to consider in developing sponsored research agreements with industry to ensure consistency with Bayh-Dole and principles of academic freedom.

The “Issues” are identified as follows:

◆ Maintenance of academic freedom
◆ Preserving fair access to information
◆ Assuring timeliness of compliance with the various requirements of Bayh-Dole
◆ “Rational” licensing
◆ Adherence to requirements of Bayh-Dole & requirements of the NIH grant

Within the document’s “Universal Points” discussion, several provisions are worth highlighting. The description of the importance and scope of academic freedom is brief, but well stated. It is helpful in trying to explain the issues to industry. Further it addresses not only publication but also indicates that academic freedom encompasses the right to select the research that will be carried out.

In the “Dissemination of Research Results” section of the document, the NIH recognizes that a delay of publication for up to thirty days is reasonable. (It is interesting to note that in the previously discussed document regarding research tools, the amount of delay that is considered reasonable is greater: 30–60 days.)

Under “Utilization,” the document indicates that granting an exclusive license is not appropriate; an option to pursue licensing rights is much more favored, and “once a sponsor decides not to exercise its option, it should not be given a second opportunity....”

The “Points for Special Consideration” include several interesting provisions as follows:

◆ Heightened scrutiny is required for certain types of agreements identified as those: (1) providing $5 million or more per year or $50 million total over the funding period; (2) where sponsor’s funding exceeds 20 percent of the institution’s research funding; (3) where sponsor’s licensing rights cover all technology by a major group or component; and (4) where the agreement term is

An agreement is suspect if the licensing grant to the sponsor effectively excludes reasonable access to the institution’s technology by others.

Contributions to general operations, rather than to specifically defined research, in return for access rights to technology should be carefully examined.

NIAID/Division of Microbiology and Infectious Diseases (DMID) Data Sharing and Release Guidelines.14

### Institutional Policies

Institutional policies are an important part of the legal framework for sponsored research agreements. The policies often reflect “industry practice,” which in contract law occasionally is used to help frame the intent of the parties. While policies vary among institutions, the most common consistent policies involve rights of publication and treatment of confidential research. Policies become the “law” of the particular institutions and so it is important that they be constructed with great precision and clarity. Often legal counsel is well versed in this type of writing. Additionally, it is important to assure that policies are carefully thought out so that they do indeed reflect the position of the institution. A policy that continually requires ad hoc exceptions may be worse than no policy at all.

#### Publication and Confidentiality

One common area of disagreement between institutions and sponsors is over publication of the results of the research. In general, most institutions will offer the sponsors an opportunity to review material prior to its publication, but will not give the sponsor approval rights. This policy is underpinned by a variety of considerations. Publication is an inherent part of a university’s mission. Distilled to its essence, the mission of an institution of higher education is to create, integrate, transfer, and apply knowledge. Research is one of the primary vehicles for creation of knowledge and publication of the research results is one of the primary vehicles for transfer and application of knowledge (see example below).

#### Example

The University of Wisconsin-Madison (UW), along with many other institutions, has recognized that generally the missions and goals of the sponsor can be served without deviating from the institutional mission. As such, a UW policy states: “The research should have promise of advancing knowledge .... Industrially sponsored research ... must be designed so as to maintain a balance between the UW’s pursuit of research as an integral part of the education process and industry’s search for useful knowledge to be applied toward the development of products, processes and services.”

As discussed earlier, a finding that an activity generates unrelated business

14 [http://www.niaid.nih.gov/LabsAndResources/resources/dmid/Pages/data.aspx](http://www.niaid.nih.gov/LabsAndResources/resources/dmid/Pages/data.aspx)
income (UBI) subjects the proceeds of that activity to an unrelated business income tax, and, for institutions that take their tax exemption under Section 501 of the Internal Revenue Code, excess amounts of UBI may put an institution’s tax-exempt status in jeopardy. There is a specific exclusion for research. Since one of the criteria for exempting research is that it serves the public good, one of the indications that something is research and therefore exempt is that it is freely publishable.

Publication is the coin of the realm for academics and one of the ways in which academic freedom — the right of faculty to publish what and where they choose — is protected. Several cases in which faculty found themselves battling a corporate research sponsor and alleged that their institutions did nothing to support their right to publish resulted in fairly widespread media attention and a conference co-sponsored by the American Association for the Advancement of Science on “Secrecy in Science.” In certain of the cases, the research agreement conferred the right of approval of publication on the sponsor and in at least one case, the faculty member had entered into the agreement without institutional review. Regardless, the failure of the institution to support the right to publish became a much discussed issue and generated some unfavorable press and tension between institutions and their faculty.

A good discussion of the application of academic freedom to the rights of faculty in research results is found in *Dow Chemical v. Allen*. In the Dow case, the company sought and obtained an administrative subpoena requiring every scrap of paper relating to the ongoing animal toxicity research of two University of Wisconsin researchers. The appellate court affirmed the district court’s refusal to enforce the subpoena. The court found that academic freedom interests “may properly figure into the legal calculation of whether forced disclosure would be reasonable.”

On occasion and with increasing frequency, a federal or state agency will include a provision in a funding agreement providing that no publication may occur without the agency’s permission. If an institution is faced with a federal agency taking this position, OSP personnel might want to review *Board of Trustees of the Leland Stanford Junior University v. Sullivan*.

In that case, a grant notice by an NIH institute indicated that the award might contain a confidentiality clause that would require researchers to obtain government approval before publishing or otherwise publicly discussing preliminary research results. The clause would prohibit the issuing of “preliminary invalidated findings” that “could create erroneous conclusions which might threaten public health or safety if acted upon” or that might have “adverse effects on ... the Federal agency.” The government contracting officer would have the ultimate approval powers. A Stanford professor submitted a proposal that included objections to the confidentiality clause.

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15 *Secrecy in Science: Exploring University, Industry, and Government Relationships*, report of the public colloquium sponsored by the American Association for the Advancement of Science (AAAS) and the Massachusetts Institute of Technology (MIT), Mar. 29, 1999. Information available at www.aaas.org/spp/secracy/AAASMIT.htm.

16 *Dow Chemical v. Allen*, 672 F.2d 1262 (7th Cir. 1982).

iality clause. When Stanford and the government could not agree with respect to the clause, the government withdrew the contract from Stanford and awarded it elsewhere. Stanford sued the agency. The court held that because of the vagueness and breadth of the confidentiality clause’s scope — e.g., “could create erroneous conclusions” that “might threaten public health” — the clause was an unconstitutional prior restraint on speech.

Keeping the results of research confidential also raises similar concerns as well as negates the fundamental research exemption under the export laws. While most institutions will agree to keep information provided by the sponsor confidential within certain parameters, they would not extend this agreement to the results of research unless they have decided to engage in classified-typed research. (See Chapter 1900 for additional discussion of this topic.)

Policy Maintenance

Good institutional policies are those that are carefully considered and written to protect the core mission and principles of the institution. Good policies do not create arbitrary barriers to research, and the institution usually does not waive them at the first sign of trouble. They are not easy to create, and they must be maintained vigilantly. Some general observations about institutional policies are as follows:

◆ The policy to protect the university and its values must be an institutional commitment, not solely the responsibility of one individual or office. All the decision makers of an institution must embrace and uphold the core academic standards related to research.

◆ Research opportunities — whether sponsored by the government or by industry — should not be considered on a case-by-case basis. Instead, a road map should be prepared. The institution should consider its mission and vision to identify principle and guidelines for its research activity and carefully vet them for appropriateness. For example, will the institution accept research that bans participation by certain nationalities? Will it accept any oversight of its right to publish?

◆ Faculty should be involved in creating the road map. After all, it’s their livelihood that is impacted.

◆ Opportunities for university groups to discuss and establish parameters should be provided.

◆ Upholding the core institutional mission should be viewed as a necessary part of encouraging continued strong public support of university research.

◆ Policies should be firmly grounded in advancing the institution’s mission. OSP staff should understand the relationship between the mission and the policy and be able to explain it to outsiders (or even in-house faculty).

◆ Policies should be re-evaluated, not on a case-by-case basis, but on an as-needed basis when situations occur that indicate a policy can be changed without compromising the mission.
◆ OSPs should be careful not to allow institutional policies to change incrementally and without specific intentions to do so.

\[\textbf{2905.10 Industry Sponsorship of Research}\]

Since the late 1980s, the amount of scope-of-work research sponsored by industry has increased dramatically. This increase is due to a variety of reasons, including
◆ the enactment of the Bayh-Dole Act that assured the ability of universities to retain title to inventions funded in whole or in part by federal funds,
◆ the decrease in industrial spending on internal research, and
◆ to a certain degree, the increasing industrial competition from industries outside the United States.

Evaluating and negotiating agreements with industrial sponsors is a challenging, yet rewarding, activity for the research administrator and university counsel. In part this is because educational institutions and industry have differing goals and missions. Additionally, working with industry research agreements requires not only application of contract law principles, but in-depth knowledge of a myriad of diverse rules and regulations, including those discussed earlier that impose certain requirements on research agreements.

Collaboration with industry is a good thing. It brings a real-world perspective to the university. It creates opportunities for students — both while enrolled at institutions and after graduation. It provides direct translation of university research for the good of the public. However, the culture and mission of universities and industries are quite different and the challenge is to locate the areas where the interests are consistent or recognize those situations when there is no area of consistent interest. (See also discussion of industry sponsored research in Chapter 1900.)

The major areas of concern in industry-sponsored agreements are
◆ control of intellectual property,
◆ publication rights,
◆ freedom to research,
◆ confidentiality of results,
◆ ownership of data, and
◆ involvement of students.

In most cases, the ability of a university to collaborate is bounded by the laws discussed above as well as the policies of the institution. At a minimum, the “rules” for the collaboration must comply with the requirements of the various laws and preserve the freedom of the faculty and students to select research areas of interest, publish, and conduct future research.

\textbf{Control of Intellectual Property}

The primary area of contention between universities and industry is usually
over control of intellectual property. The following are points to consider based on the general rules of collaboration discussed above. OSP staff should

◆ be sure to locate and understand the institution’s policies regarding ownership of intellectual property;

◆ understand the funding profile of the research;

◆ be particularly concerned about material transfer agreements (MTAs); and

◆ resist the temptation (or the entreaties/threats of the researcher) to provide ownership of the intellectual property to the industrial sponsor.

Institution’s IP Policies
OSP personnel should be sure to locate and understand the institution’s policies regarding ownership of intellectual property (IP). It is considered very bad form to transfer intellectual property, whether by assignment or by license, when one doesn’t own it.

Research Funding Profile
It is important that OSP staff understand the funding profile of the research. Much research today requires substantial resources for facilities, equipment, supplies, and personnel. A common practice of using funds from more than one source in support of a given research activity, unless carefully evaluated and continuously monitored, may create conflicting positions regarding intellectual property rights among the various sponsors. In any agreement with an extramural research sponsor, the institution must consider the existing contractual obligations of the institution and/or the researcher(s). This is especially important where the agreement under negotiation is for research whose purpose is the same or similar to research conducted using personnel or resources that are funded, however minimally, by another sponsor. Obligations under existing federal or other extramural sponsorship agreements must be identified and reconciled with the agreement under negotiation. Failure to reconcile potentially conflicting claims to ownership of intellectual property may result in a lawsuit for breach of contract against the institution and damage the professional reputation and credibility of the researcher.

Rights to Inventions
When the same or similar research is supported with federal funds, however small the amount, it is better practice to assure that the nonfederal sponsor receives only such rights to an invention as is consistent with the Bayh-Dole Act. For example, providing an industrial sponsor an option to a license to any invention conceived or reduced to practice during the research and patented by the institution would be consistent with Bayh-Dole.

MTA Considerations
Research administrators should be particularly concerned about a material transfer agreement (MTA). Companies generally require that researchers and/or the institu-
tion enter into an MTA when they receive biological or other research materials from the company. Problems can arise when an MTA provides for a grant back to the company of a license or even ownership of new materials or inventions made by the researcher.

Just as with sponsored research agreements, it is essential that the institution and the researcher carefully examine all commitments made in the MTA in light of past and future obligations relating to funding. If materials received from one company and covered by an MTA are to be used in research funded under a grant from another company, access rights to inventions must not conflict.

If an invention covered by an MTA was supported with federal funding and the institution declines to take title, the federal funding agency has the opportunity to take title to inventions declined by the institution. If title to an invention were taken by a federal funding agency, the agency would not be bound by the terms of an MTA. Therefore, the researcher and institution must take care not to make promises in an MTA that the federal funding agency may not be willing to honor.

Ownership of IP

Research administrators should resist the temptation (or the entreaties/threats of the researcher) to provide ownership of the IP to the industrial sponsor. If there is more than one funding source within the research laboratory, the activity would need to be evaluated for the potential for commingling of funding. If the potential for commingling exists, especially if one source of funds is federal, the only sure way to allow transfer of ownership to the industrial sponsor is to take steps to assure that funding and other resources are carefully separated — sometimes referred to as “building a wall.”

In considering whether or not to build a wall, the institution should bear in mind the following:

◆ It is hard to build a wall to prevent commingling and it is resource intensive to maintain the wall.

◆ Conducting research behind a wall is not the most efficient way to do research. Much research benefits from the free exchange of ideas and equipment and shared personnel.

    Even if it appears that there will be no commingling of funding sources, transferring ownership to a sponsor is just not good practice for a variety of reasons including the following:

◆ Sometimes an invention is based on work performed under several different projects. Further, even if the determination has been made that there is no commingling of funds, the institution neither can, nor should, prevent commingling of ideas.

◆ Once the institution has given away ownership, it is unlikely to get it back. The researcher may find that he or she has nothing left to interest prospective sponsors and, in a worst-case scenario, the researcher might be prevented from continuing in that area of research.
Issues Involving Clinical Trials

Clinical trials sponsored by pharmaceutical companies may require a different analysis. Generally, with clinical trials, the scope of work (the protocol) is highly defined and quite different from other research projects, the budget for the trial is usually full cost recovery, any invention that arises is unlikely to have a blocking effect on the researcher’s ongoing work, and it’s almost impossible to negotiate significant changes.

Transfers of Copyright

It is less dangerous to transfer ownership of specified works of authorship, i.e., copyrightable works. However, the type of work and the potential impact must be carefully evaluated. Transferring ownership of the copyright to the written report prepared at the conclusion of the project may be acceptable, especially if a right to use is reserved for the researcher and institution. Computer software takes special evaluation as it is copyrightable, but may also be patentable and therefore, subject to the provisions of Bayh-Dole. A good rule is to transfer the right to use, but not ownership of the software.

12905.11 The Role of University Counsel

As with many matters within the sponsored research enterprise, OSP staff needs to understand the institution’s policies and decision-making model regarding the roles and responsibilities of legal counsel. Is counsel’s role to serve as watch dog over all institutional risk, or is it to advise those who are making those determinations? What if a truly legal question arises? Who has the authority to weigh the matters and chart the institutional course?

The answers to these questions may vary from institution to institution and may even vary from issue to issue. The following discussion is simply the author’s perspective of a good role for counsel — let’s call it “Law in a Box.”

Generally, a law inscribes the boundaries of a box. An organization can wander all around in that box and still be “legal,” i.e., within the law. However, given the nature of the organization, it might be best for the organization to confine its activities to the upper-right corner of the particular box. For another law and another box, the lower-left corner might be the preferred location. Clearly, counsel should play a major role in determining the boundaries of the box as this is very likely a legal decision. Counsel, who understands the organization and its mission well, may also be very helpful in finding the very best place within the box for the organization. While this is not a legal decision, many counsel are well suited to help evaluate the options and alternatives based on their knowledge of both the law and the organizational interests and mission.

On other occasions, decisions may have legal ramifications, for example, potential liabilities, but are not wholly legal decisions. Rather, they are business decisions and the institutional interest might be better served by being willing to accept certain risks. And on a few rare occasions, the institution’s best interests will be served
by being outside the box. Determining whether or not this is possible takes careful coordination between counsel and the individual(s) charged with making the final decision on the matter for the institution. For example, there are some areas where being outside the box may mean the institution faces a higher risk of being in breach of any agreement, something most counsel would view with disfavor, but something that in a few — hopefully very rare — circumstances might be the best choice for an institution. The research administrator needs to understand that if the decision is too far outside the box, legal ethics may come into play and require counsel to ratchet the decision up to a higher authority.

At the beginning of this chapter I mentioned that finding reasons to say yes, not no, is the preferred mode for university counsel in assisting the institution and facilitating sponsored research. However, this immediate discussion also illustrates that there could be situations where counsel’s advice should be heeded. Thus, the professional relationship between a research administrator and a university attorney must be one of a true partnership.

¶2905.12 Conclusion

The area of university sponsored research is home to a number of legal considerations as this chapter points out. These considerations range from the very basic elements of the law to complex topics, as the areas intellectual property, export controls, and international research illustrate. Regardless of the topic and degree of complexity, however, professionals interested in a vibrant and success research administration career need to have a grasp of their considerations.

Secondly, it is most desirable that university sponsored research offices and legal offices have a strong and supportive bond to respond to the ever-changing environment of sponsored research. In its best iteration, their interactions blend the strengths of both to apply the law in a rational way in the best interest of the institution, its faculty, sponsored research, and the public.

One final point. University leadership, whether in sponsored research or law, should keep the “big picture” in mind. That “big picture” is increasing sponsored research in an increasingly competitive funding environment. That is the challenge for the future.
This section includes expanded discussions of legal topics relating to sponsored research administration. These materials are culled from a variety of authoritative sources.

**¶2920.1 IRS Revises ‘Safe Harbors’ for Sponsored Research Agreements**

AIS editors

The Internal Revenue Service (IRS) issued a document, Revenue Procedure (Rev. Proc.) 97-14, providing a safe harbor for sponsored research activities (see ¶2905.4).

Under Rev. Proc. 97-14, if (1) the research sponsor pays a competitive price for the right to use any resulting technology, and (2) the royalty rate was determined at the time that the technology was available for use (not when the research contract was signed), the research agreement would be presumed not to be a private business use arrangement. And, because the federal government is treated in the same manner as a business corporation for purposes of the private business use rules, the Rev. Proc. 97-14 safe harbor applied equally to federally sponsored research agreements. However, it has not been entirely clear how the safe harbor works with the Bayh-Dole requirements because under Bayh-Dole, the federal sponsor receives a non-exclusive, royalty-free license; when the college or university subsequently licenses the technology developed under the federal contract to a third party for a royalty of some amount, the research sponsor (the federal government) will be deemed to have received better than a competitive price for the technology because it paid no royalty. In addition, the federal government’s 0% royalty rate was determined at the time that the federal research contract was entered into, not at the time that the technology was available for use.

Rev. Proc. 2007-47, issued by the IRS last year, modifies and supersedes Rev. Proc. 97-14. Rev. Proc. 2007-47 still contains the provisions applicable to corporate sponsored research agreements, but it adds a separate set of safe harbor rules that apply to federally sponsored research agreements only. Under its provision relating to Bayh-Dole, the safe harbor test for a federally sponsored research agreement is met if all of the following are present:

◆ A single sponsor agrees, or multiple sponsors agree, to fund governmentally performed basic research.

◆ The college or university determines the research and the manner in which it is to be performed (for example, selection of the personnel to perform the research).

◆ Title to any patent or other product incidentally resulting from the basic research lies exclusively with the qualified user.

◆ The sponsor or sponsors are entitled to no more than a nonexclusive, royalty-free license to use the product of any of that research.

In applying the Rev. Proc. 2007-47 guidelines to federally sponsored research agreements, the IRS says, the rights of the federal government mandated by the Bayh-
Dole Act will not cause the research agreement to fail the safe harbor test, provided that the requirements of the second and third conditions above are met, and “the license granted to any party other than the qualified user to use the product of the research is no more than a nonexclusive, royalty-free license.”

Some confusion continues to exist, however. Here is the crux of the confusion: Because the qualified user is the licensor, not the licensee, what is meant by a license “granted … the qualified user?” In addition, does the apparent requirement that no third party can receive a license other than a license that is nonexclusive and royalty-free mean that the college or university cannot subsequently enter into exclusive or royalty-paying licenses with third parties?

These concerns have been expressed to the IRS officials who drafted Rev. Proc. 2007-47 by groups representing the interest of college and university stakeholders, and there may yet be some clarifying language forthcoming from the IRS.

Agreements With Federal Laboratories

Certainly, the majority of sponsored research agreements between the federal government and colleges and universities are grants, contracts and cooperative agreements. However, other funding mechanisms do exist and are used. For example, the Department of Energy’s (DOE) national laboratories “routinely share their technologies, capabilities, and knowledge with outside entities by performing research, licensing the laboratories’ technologies, and making their facilities and personnel available to others.”

The following outlines four types of arrangements, generally considered “technology transfer,” that an institution could have with a DOE laboratories. Figure 2920.2-1, included on page 2920:5, shows the number of agreements associated with the four types of activities during fiscal years 2006–2008.

◆ Cooperative research and development agreements (CRADA): Under these agreements, laboratory employees collaborate with nonfederal partners to carry out research projects that will directly benefit DOE program missions and the partners’ research and development goals. Under a CRADA, a laboratory may contribute personnel, equipment, or other in-kind resources to a project, while its CRADA partners must contribute funds, in-kind resources, or both. For example, in fiscal years 2006 through 2008, all 17 of DOE’s national laboratories entered into CRADAs with private firms, universities, state or local governments, nonprofit organizations, or other nonfederal partners. (For more on CRADAs, see ¶2905.3.)

◆ Nonfederal work-for-others agreements: Under a nonfederal work-for-others agreement, a DOE laboratory agrees to conduct research on behalf of a nonfederal sponsor. Although this research must be consistent with the laboratory’s and DOE’s missions and draw on the laboratory’s unique capabilities, these agreements differ from CRADAs in that the research need not directly benefit DOE’s programs. Consequently, the sponsor must pay the entire cost of a project done under these agreements. In turn, however, the sponsors typically may elect to receive ownership of any new intellectual property, including new inventions by laboratory employees, resulting from the research.

For example, Los Alamos National Laboratory in New Mexico, under a nonfederal work-for-others agreement with the University of California, Los Angeles, is developing key components of a detection and response system for avian flu, which will enable rapid DNA analysis of a large number of biological samples at multiple locations worldwide. Drawing on the laboratory’s expertise in computer modeling and simulation, and using its patented biological analysis technologies, the laboratory will develop computer software and hardware, as well as analysis tools and protocols for detecting and responding to infectious disease outbreaks.

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1 This discussion is drawn from material included in Technology Transfer: Clearer Priorities and Greater Use of Innovative Approaches Could Increase the Effectiveness of Technology Transfer at Department of Energy Laboratories, GAO-09-548, June 2009, www.gao.gov/docsearch/reandtest.html.
17 of DOE’s national laboratories had work-for-others agreements with nonfederal partners in fiscal years 2006 through 2008. In fiscal year 2008, 35 percent of the agreements were with universities, state or local governments, or other nonfederal sponsors.

◆ **Licensing agreements:** DOE laboratories share their technologies by licensing their patented discoveries, copyrighted software programs, or other intellectual property to nonfederal entities seeking to use or commercialize those technologies. In some cases, the licensee agrees to pay fees or royalties to the laboratory in exchange for the laboratory’s permission to use or commercialize a technology.

◆ **User-facility agreements:** Under a user-facility agreement, scientists from outside organizations can use DOE’s unique scientific equipment for their own research, sometimes in collaboration with laboratory staff. Several of DOE’s national laboratories are home to the department’s user facilities. For example, the Center for Nanoscale Materials — at Argonne National Laboratory in Illinois — makes customized laboratory space and specialized equipment available for research on materials and structures at the atomic, or nano, scale. Some of the center’s users are also allowed to access Argonne’s Advanced Photon Source for nanoscience research. Users may conduct their research at DOE’s facilities for free or a negotiated cost, if the results of their research will be made public.

![Figure 2920.2-1: Technology Transfer Activity at DOE Labs, FYs 2006–2008](image-url)

A Sponsored Research Agreement, Explained
James Casey, American University

[Author’s Note: This section provides some observations of a standard (template) sponsored research agreement (SRA) in order to give the reader insights into contract construction, language, and the relationship of the parts to the whole. This section is for illustrative and educational purposes only, and does not constitute legal advice nor an appropriate agreement for any specific project. Author observations are provided in italics.]

SPONSORED RESEARCH AGREEMENT

This Agreement is made by and between ________________, a _______________ having its business address at ______________________________ (hereinafter “University”) and ______________, having its business address at ____________________ (hereinafter “Sponsor”).

The purpose of this Agreement is to promote the increase of useful knowledge through research relating to

[the title or summary of the project should be placed here].

[Include the following paragraph for federal flow-through subcontracts]

The United States __________ Office (hereinafter “Prime Sponsor”) has awarded to Sponsor under the _________________ Program, Contract No. ______________ entitled “________________________” (hereinafter “Prime Award”). ______________ has proposed this research project, as outlined and detailed in Prime Award, in collaboration with University, which is attached hereto as Appendix D. Sponsor desires to have University conduct work with this research project. Any approvals or communication necessary under this Agreement shall be directed to Sponsor for transmittal to the aforementioned Prime Sponsor. Supplemental Federal Acquisition Regulation clauses (if applicable) shall be attached hereto as Appendix C.

WHEREAS, the research program contemplated by this Agreement is of mutual interest and benefit to University and Sponsor and will further University’s instructional and research objectives in a manner consistent with its status as a non-profit, tax-exempt, educational institution;

NOW, THEREFORE, the parties hereto agree as follows:

1. RESEARCH PROJECT

1.1 University agrees to undertake reasonable efforts to perform the research project entitled “______________________________” (hereinafter “Project”) specifically described in the attached Statement of Work (Appendix A) which by reference is incorporated into this Agreement, and such other work, if any, as may be mutually agreed upon in an executed amendment to this Agreement.

1.2 The Project shall be carried out under the direction of Professor ________________ (hereinafter “Principal Investigator”) while employed by University, and by others as assigned by the Principal Investigator (the Principal Investigator and such others collectively referred to hereinafter as “Personnel”).
1.3 If, for any reason, the Principal Investigator cannot conduct or complete the Project, University will appoint a successor, subject to the written approval of Sponsor, which approval shall not unreasonably be withheld or delayed. If a replacement acceptable to University and Sponsor is not available, this Agreement shall be terminated as provided in Section 9 herein.

2. TERM

[SRAs should always have start and end dates, to provide the ultimate in clarity to all parties concerned.]

This Agreement shall begin _______, 2015, and end _______, 20_ (“Term”), unless completed earlier or terminated in accordance with Section 9 or extended upon written agreement by the parties.

3. FACILITIES

[It is also quite helpful to include facility and equipment within the Statement of Work that should be included in Appendix A.]

University agrees to furnish such laboratory facilities and equipment as it shall determine necessary for the Project. Equipment provided by Sponsor for University’s use in the Project shall be subject to University’s approval. All right and title in and to any equipment purchased or manufactured by University in the performance of the Project shall vest exclusively in University.

4. PAYMENT

[Insert the following clause as appropriate. The type of contract/payment provision is incredibly important to ensure that there are no issues during project implementation, payment, and closeout. Be specific and clear about what type of contract/payment provision is involved. This is not the time to be vague.]

4.1 Cost-Reimbursable Agreement. Sponsor will reimburse University for the cost of conducting the Project. The parties estimate that the total cost to Sponsor to complete the specified Project will be $______________.

Allowable costs eligible for reimbursement to University for performance of the Project under this Agreement shall be determined in accordance with: (1) the terms of this Agreement; and (2) the budget attached hereto and incorporated herein as Appendix B.

Sponsor shall reimburse University’s invoices on a basis no more frequently than monthly for allowable costs. Unexpended balances remaining at the end of any funding period may be carried forward into subsequent budget periods. Adjustments across budget categories, not to exceed 25% of the total costs awarded, shall be at the discretion of the Principal Investigator.

At the end of the Project, if there is a balance owed to Sponsor of $100 or less, University may keep the balance. Any amounts over $100 will be returned to Sponsor unless the parties agree otherwise.

4.2 Fixed-Price Agreement. Sponsor will pay University the amount of _________
for performing the Project. The parties estimate that this price is sufficient
to support the Project. University may submit to Sponsor a revised Budget
requesting additional funds if Sponsor requests a change in the scope of work
of the Project. Sponsor will not be liable for any payment in excess of the Budget
except in the case of Sponsor’s written agreement, nor will Sponsor be entitled
to any reversion of project funding as it relates to any residual balance at the
completion of the Project.

Payment shall be made by Sponsor according to the following schedule:

a. [$_____] / [≥50% of the total fixed price] upon execution of the Agreement by the
   Parties;

b. [$_____] / [≥40% of the total fixed price] upon [fixed date or completion of
   milestone]; and

c. The remaining balance of the fixed price to be paid upon submission of the final
   report.

4.3 Payment. Payments shall be made by check or wire transfer and directed to the

_______________________
Attn: __________________
_______________________
_______________________
_______________________

[Confidentiality of information (proprietary information, etc.) during project performance
is one of the major issues in sponsored research administration. Sometimes it is necessary
to sign a confidentiality/nondisclosure agreement prior to signing an SRA, or the terms of

5. REPORTS AND INSPECTIONS

5.1 The Principal Investigator shall furnish Sponsor with written reports on the
   progress of the Project on such dates as are mutually agreed upon and a final
   report on the entire Project within ninety (90) days after termination of this
   Agreement, unless specified otherwise in the Statement of Work.

5.2 In the event representatives of Sponsor wish to inspect a Project site during
   the Project, University agrees to allow such inspections at mutually agreeable
   times, during normal business hours, and if requested, to reasonably assist the
   inspectors and representatives in their activities.

6. CONFIDENTIALITY

[Confidentiality of information (proprietary information, etc.) during project performance
is one of the major issues in sponsored research administration. Sometimes it is necessary
to sign a confidentiality/nondisclosure agreement prior to signing an SRA, or the terms of
a confidentiality/nondisclosure agreement may be built into the SRA. Either way, mutual language ensuring complete coverage is quite important.]

6.1 Confidential Information refers to any confidential or proprietary information which is transferred from one party to the other under this Agreement, providing the information is transferred in writing and marked as Confidential, or to information which is initially disclosed orally, or in any other non-written form, is identified as confidential at time of disclosure and then summarized in writing and confirmed by the disclosing party as Confidential within thirty (30) days of the initial disclosure.

6.2 Confidential Information shall not include information which (a) is known or open to the public or otherwise in the public domain at the time of disclosure; (b) becomes part of the public domain after disclosure by any means except through breach of this Agreement by the recipient; (c) is already known to the recipient at the time of disclosure; (d) is obtained by the recipient from a third party who has a lawful right to disclose it; (e) is independently developed by recipient without use of disclosing party’s Confidential Information as evidenced by recipient’s written records; (f) is disclosed by a third party not under any known obligation of confidentiality; or (g) is required to be disclosed by law or statutory regulation or pursuant to a court order.

6.3 The data, methods and results of the research generated under this Project shall not be considered Confidential and may be used and published by University pursuant to the terms of Sections 7.0 and 11.0.

6.4 The parties agree that for a period of _____ (__) years from the expiration, or early termination date, of this Agreement they will neither disclose to any third party nor use for any purpose other than the purposes of this Agreement any Confidential Information of the other party unless the disclosing party has given its express written consent. Additionally, each party agrees only to disclose the other party’s Confidential Information to those employees, students, affiliates, and/or agents, as necessary to facilitate the performance of obligations under this Agreement.

6.5 The receiving party acknowledges that the disclosing party’s Confidential Information is owned solely by the disclosing party and that the unauthorized disclosure of such information shall entitle the disclosing party to seek injunctive relief as well as any and all other rights and remedies available at law or in equity for such breach. The receiving party may retain copies of all Confidential Information for recordkeeping and regulatory purposes and shall undertake reasonable efforts to maintain their confidentiality.

7. PUBLICATION

[Universities that are non-profit in nature need to maintain open publication policies as part of their tax status with the U.S. Internal Revenue Service (IRS), not to mention that this is reflective of general public policy. Of course, as you will see in the language below, provision to review prior to publication for proprietary or confidential information is part of trans-
7.1 Sponsor recognizes that under University policy, the Project data, methods and results are not Confidential Information. University and its employees shall have the right, at their discretion, to release, present, or publish any data, writings, or material reflecting the methods and results of the Project or to use such in any way for its educational and research purposes.

7.2 Prior to submission for publication or public presentation of a manuscript or abstract describing the results of the Project, the publishing party will send a copy of the proposed manuscript or abstract to the non-publishing party. Within __________ days of receipt of the manuscript, the non-publishing party shall identify, in writing, for the publishing party specific information in the manuscript that is either potentially patentable or constitutes that party’s Confidential Information. Such delay shall not, however, be imposed on the filing of any student thesis or dissertation.

7.3 Upon receipt of the non-publishing party’s written notice the publishing party will redact any identified Confidential Information from the manuscript to be submitted or published. If the non-publishing party has identified potentially patentable information, the publishing party will delay submission or publication for a maximum of an additional __________ days in order to protect the potential patentability of any invention described therein. If the non-publishing party has not identified any potentially patentable information, the publishing party may submit or publish the redacted manuscript without further delay.

7.4 If the __ day review period expires without written notice from the non-publishing party, the publishing party shall be free to submit such manuscript for publication and to publish the disclosed research results in any manner consistent with professional standards.

8. INTELLECTUAL PROPERTY AND LICENSING

[Intellectual Property (IP) is one of the major possible troublesome areas in SRAs. There are different perspectives on how to address this at the SRA stage. Some would prefer to address the topic in a separate agreement that is attached to the agreement; some would prefer to address IP at this stage only if there is a high chance of creating foreground (project) IP, or if background (prior created) IP is being brought into the project; and others may prefer to negotiate general language as you will see below, and then address it more fully later as necessary. And one final point: The creation of jointly owned IP will lead to additional management and financial costs. Be ready to deal with those.]

8.1 For purposes of this Agreement, “Inventions” means potentially patentable inventions and discoveries first conceived and actually reduced to practice solely in performance of the Project. University shall own all right, title and interest in and to any Inventions made solely by Personnel and other University employees, agents, and/or students (“University Inventions”). Sponsor shall own all right, title and interest in and to any Inventions made solely by Sponsor employees (“Sponsor Inventions”). The Parties shall jointly own all right, title and interest
in and to any Inventions made by a combination of one or more employees, agents, and/or students from both University and Sponsor ("Joint Inventions"). Unless otherwise agreed by the parties in writing, this Agreement does not affect ownership of or rights to any Inventions or other intellectual property developed by University or by Sponsor prior to, or outside the scope of, the Project.

8.2 University agrees to notify Sponsor of any University Invention hereunder within thirty (30) days after an invention disclosure. Sponsor shall treat all University invention disclosures as Confidential Information subject to the provisions of Section 6. Each party will promptly notify the other of any Joint Invention.

8.3 Sponsor shall indicate to University in writing, within sixty (60) days of Sponsor’s receipt of a notification of invention from University, whether it wishes for University to file a patent application in the United States on the University Invention, or Joint Invention, or to register copyrightable material pertaining to such invention (excluding works authored by University employees under Section 8 herein). In addition, if Sponsor chooses to seek patent protection for a University Invention or Joint Invention in any foreign countries, Sponsor shall so notify University in writing at least sixty (60) days prior to the applicable filing deadline(s). In the absence of such notification by Sponsor, no foreign patent protection need be secured by University.

8.4 If Sponsor requests that University file one or more patent applications or register copyrightable material as set forth in Section 8.3, Sponsor will reimburse University for all documented expenses incurred to secure and maintain the applications and/or registrations within thirty (30) days of receipt of an invoice. University will keep Sponsor promptly informed regarding the status of any patent application(s) or registration(s) filed at Sponsor’s request and expense and will give Sponsor reasonable opportunity to comment. Sponsor shall bear any maintenance costs for all such issued patents and copyright registrations, if applicable. If Sponsor chooses to directly file at its expense, rather than request University to file, any applications for University Inventions or Joint Inventions or registrations for copyrightable material under this Section, Sponsor shall notify University’s administrative contact in Section 14 prior to such filing. If Sponsor does not request that University file a patent application within a given territory within the 60-day period specified in Section 8.3, University has the right, but not the obligation, to file such an application at its sole expense and for its sole benefit.

8.5 To the extent University has the legal right to do so, University hereby grants to Sponsor (a) a non-exclusive, non-transferable, non-sublicensable, royalty-free license to practice University Inventions for non-commercial purposes and (b) an option to negotiate a limited exclusive, royalty-bearing commercial license under reasonable terms, for the right to make, use and sell, have made and have used, University Inventions or Joint Inventions claimed in patent applications or issued patent(s) filed at Sponsor’s election and expense as set forth in Section 8.3. Such
option shall be in effect and exercisable for six (6) months after Sponsor receives University’s notification of Invention disclosure. If Sponsor does not exercise its option in writing within six (6) months from the date it receives notification of Invention disclosure from University, or if University and Sponsor do not reach an agreement on a royalty-bearing commercial license within six (6) months following the date of notice of election, University retains the right to license the Invention or University’s rights in a Joint Invention to third parties without further obligation to Sponsor.

8.6 In consideration of Sponsor’s support of the Project, and to the extent that University has the right to grant such a license, University shall grant to Sponsor a non-transferable, non-exclusive, irrevocable, worldwide, royalty-free license to use, reproduce, publish, or re-publish, or otherwise disseminate any copyrightable materials that are developed from work supported by Sponsor under this Agreement and assigned to University, for non-commercial purposes. Notwithstanding the foregoing, under University policy, scholarly works (e.g., academic articles or publications) resulting from the Project are not subject to the terms of this Section 8.6 and University Principal Investigators shall own and maintain copyright in such scholarly works.

8.7 University shall retain the right to utilize for non-commercial research and/or educational purposes any patent rights and/or copyrights licensed to Sponsor resulting from this Agreement.

8.8 Each party shall have a non-exclusive right to sublicense Joint Inventions subject to the other party’s written approval, which approval shall not be unreasonably withheld.

8.9 Any inspection or monitoring activities conducted by the Sponsor shall not give rise to a presumption of joint ownership with respect to any inventions developed during the project absent specific documentation regarding joint contributions.

8.10 To the extent that visiting Personnel perform work within the scope of the Project while at the other party’s facilities, the parties may negotiate, but are not so required by this Agreement, a separate agreement denoting each party’s rights to Inventions developed by such Personnel within such scope.

8.11 Sponsor is hereby informed that the United States government, as a matter of statutory rights under the Bayh-Dole Act (35 U.S.C. Section 200 et seq.), may hold a non-exclusive license and certain other rights under 35 U.S.C. 200-212 to patents on inventions made resulting from research conducted by University where funding for such research includes funds supplied by the United States government. In the event the United States government has such rights or in the future is found to have such rights with respect to any or all University Inventions or Joint Inventions, any license contemplated under this Agreement, or ultimately executed, even if termed an “exclusive license,” shall be understood to be subject to such rights of the United States government.
9. TERMINATION

[Termination language is critical in every contract. Make sure to cover every possible contingency that requires termination. Do not leave any gaps for the other party to exploit.]

9.1 Either party may terminate this Agreement prior to the end of the Term set forth in Section 2 hereof or any agreed upon extension of said Term, by giving sixty (60) days written notice to the other.

9.2 Upon early termination of this Agreement, Sponsor shall pay all costs accrued by University as of the date of termination, including non-cancelable obligations for the Term of this Agreement, and obligations for all Personnel appointed before the effective date of termination and appointed specifically to work on the Project.

10. INDEMNIFICATION, LIMITATION OF LIABILITY, AND NEGATION OF WARRANTY

[Indemnification, liability, and warranty are additional areas of importance in sponsored research contracting. The key points here are to address all contingencies that may arise during the project, and make sure that you are not covering the other party’s acts or omissions. Like other areas of sponsored research contracting, being fair and equitable are the key attributes to successful contracting and long term collaboration. This is also an area where public and private universities differ – public universities are often restricted by state statute, regulation, and/or case law as to what liability, indemnification, and warranty language they may accept. Private universities have more flexibility when it comes to contracting language, and then at that point it becomes a business decision.]

10.1 Sponsor agrees to indemnify, hold harmless and defend University and its officers, employees, affiliates, and agents against any and all claims, suits, losses, damages, costs, fees, and expenses resulting from or arising out of (a) either party’s performance of this Agreement, except to the extent caused by University’s gross negligence or willful misconduct; (b) Sponsor’s use of the research data and/or results of the Project; or (c) Sponsor’s use, manufacture, or sale of products or inventions made by use of the results of the Project.

10.2 University makes no representation other than those specified in this Agreement. University makes no express or implied warranties including implied warranties of merchantability or fitness for any particular purpose of data or technical information derived from this research project or of any tangible or intangible property or property right.

10.3 Except for confidentiality and indemnification obligations set forth herein, to the maximum extent permitted by law, in no event will either party be responsible for any incidental, consequential, indirect, special, punitive, or exemplary damages of any kind, lost goodwill, lost profits, lost business or other indirect economic damages, whether such claim is based on contract, negligence, tort (including strict liability) or other legal theory, regardless of whether such party was advised or had reason to know of the possibility of such damages in advance. Additionally, University’s total liability under this Agreement shall not be in excess of the total amount of commitment paid by Sponsor to University under Section 4.
11. PUBLICITY

Publicity sections tend to be governed by common sense and a strong belief in collaboration, but in 11.2 below the issue of reporting grant activity is one that needs to be addressed. What happens if sponsors want their funding to be kept confidential? What can public universities keep out of the public eye? These are questions you may be forced to consider at some point in your career.

11.1 Sponsor shall not use the name of University, nor any University faculty member, employee, or student, or any trademark, service mark, trade name, or symbol of University, in any promotional statement, product, advertising, or news release, unless Sponsor has received University’s prior written consent. Permission may be withheld at University’s sole discretion.

11.2 Sponsor agrees that University and its Personnel may disclose the Project title and duration, name of Sponsor, and total amount awarded to University hereunder, for institutional reporting purposes, including publicly accessible websites, mandatory conflict of interest disclosures, and as required by applicable law or for federal and other funding applications.

12. FORCE MAJEURE

Force majeure – or Acts of God – clauses are common in contracts, period. These are not unique to sponsored research.

Neither party will be responsible for any failure to perform due to unforeseen circumstances or to causes beyond the party’s reasonable control, including but not limited to acts of God, war, riot, embargoes, acts of civil or military authorities, fire, floods, accidents, strikes, shortages of transportation, facilities, fuel, energy, labor or materials, or changes in applicable laws or regulations affecting this Agreement.

13. EXPORT CONTROL REGULATIONS

The area of export control has become increasingly visible and important over the last ten years or so, and it is important that you, at a minimum, put adequate language into the contract to cover this contingency. Of course, if there is absolutely no possibility that export control will arise in a particular project, then it would simplify matters to simply remove such a section from the SRA. That is a business decision, of course.

13.1 University is committed to the principle of “Openness in Research” which precludes acceptance of any research that imposes access, dissemination, or participation restrictions on the conduct, products, or results of its research. University performs only unclassified, non-secret research, openly conducted. Thus, it conforms with both 15 CFR 734.3(b); 734.8 (EAR) and 22 CFR 120.11(8) (ITAR) requirements for public domain “fundamental research” excluded from those regulations (the “Fundamental Research Exclusion” or “FRE”).

13.2 Sponsor acknowledges that the export and/or re-export of certain technology, technical data and information, software, materials, equipment and other commodities may be subject to export control laws, rules, and regulations of the United States (hereinafter “Export Controlled Information”) and that such laws,
rules, and regulations could preclude or delay communications between the parties of research results from this Project. University’s obligations hereunder are contingent on compliance with such applicable laws, rules, and regulations.

13.3 If Export Controlled Information is required to conduct research under this Project, Sponsor will so inform University in writing, directed to both the Administrative Officer and the Director of Export Controls listed in Section 14, prior to any such disclosure, and shall not forward or provide any export controlled information to University without the express written permission of University. The burden shall be on Sponsor to (a) identify the nature of the export controlled item, including, e.g., the appropriate Export Classification Control Number or the item’s inclusion on the United States Munitions List; (b) prevent such export controlled information from being improperly disclosed or exported; (c) to obtain the appropriate license or approval from the relevant federal agency; and/or (d) to invoke an available exception, exemption, or exclusion. University shall have the right to terminate the Agreement under Section 9, if the disclosure of export controlled information under license or otherwise, would jeopardize University’s ability to invoke the fundamental research exclusion regarding the conduct or reporting of its research. In any event, if necessary for the continuation of the research under this Project, upon written notification and subsequent approval, the parties will cooperate to ensure that an appropriate plan is put in place to handle the transfer of any export controlled information. At any time, University may either refuse receipt of any controlled information or it may terminate the Agreement if necessary to protect the Fundamental Research Exclusion.

14. NOTICES

Notices, invoices, payments and other communications hereunder shall be deemed to have been made when delivered, sent by fax or courier, or when mailed first class, postage prepaid, and addressed to the party at the address given below, or such other address as may hereafter be designated by notice in writing:

SPONSOR:

__________________________
__________________________
__________________________
__________________________

UNIVERSITY:

If administrative:

__________________________
__________________________
__________________________
__________________________
15. MISCELLANEOUS

[This section is a general catch all section that covers other general aspects of the contract, including areas that bear upon collaboration, general principles of contract interpretation, the survivability of specific clauses, and governing law. In fact, in other sample SRAs, these clauses may be treated to their own separate sections. In other words, when it comes to this section, there is no right way to draft it. Covering all your bases is the order of the day.]

15.1 University and Sponsor agree that the Personnel are acting as agents of University and not as agents or employees of Sponsor with respect to their work on this Project.

15.2 This Agreement may not be assigned by either party without the other party’s prior written consent. This Agreement, and all rights and obligations hereunder, shall be binding upon the respective parties and their respective permitted heirs, successors, licensees, and assignees as permitted herein.

15.3 This Agreement may be executed in counterparts, each of which shall be deemed an original, but each of which shall constitute one and the same instrument. Facsimiles or scanned copies of signatures or electronic images of signatures shall be considered original signatures unless prohibited by applicable law.

15.4 No provision of this Agreement, whether express or implied, shall be construed as establishing, constituting, giving effect to or otherwise recognizing any partnership, joint venture, pooling arrangement, or formal business organization of any kind. No party to this Agreement shall have the authority to represent or bind the other party, or to take binding action or make any statements, representations, or commitments of any kind on behalf of the other party, except as may be expressly provided for herein or authorized in writing by the parties.
15.5 If any provision contained in this Agreement is held invalid, unenforceable, or contrary to law, then the validity of the remaining provisions of this Agreement shall remain in full force. In such instance, the parties shall use their reasonable best efforts to replace the invalid provision(s) with legally valid provisions as similar in terms to such provision as is possible. The provisions of Sections 5, 6, 7, 8, 10, 11, and 13 shall survive the expiration or termination of this Agreement.

15.6 This Agreement shall be governed by and construed according to the internal laws of the State of _______ without reference to its rules concerning choice of law or conflict of laws. In the event of a dispute arising under this agreement, the parties will seek to settle matters amicably between themselves. In the event such a resolution cannot be reached, the parties consent to dispute resolution procedures including, but not limited to, mediation and/or arbitration in accordance with the American Arbitration Association.

15.7 This Agreement represents the entire agreement of the parties with respect to its subject matter and supersedes any prior or contemporaneous agreements, to the extent inconsistent with the terms or conditions herein, relating to the subject matter as between the parties. In the event of an inconsistency or conflict, the terms of this Agreement as printed in full herein shall take precedence over those in any attachments or exhibits to the Agreement, whether or not incorporated by reference. Any amendments must be in writing and signed by both parties. Use of any purchase orders to facilitate issuance of payments under the Project shall be in accordance with the terms of this Agreement, and any terms or conditions contained within such purchase order shall not apply and are hereby disclaimed.

15.8 The headings in this Agreement are solely for convenience of reference and shall not affect interpretation.

The parties hereto have caused this Agreement to be executed by duly authorized representatives effective as of the later date indicated below:

SPONSOR

By:___________________________  By:_____________________________
Title:_________________________  Title: ___________________________
Date: ________________________  Date:_________________________

APPENDIX A: STATEMENT OF WORK
APPENDIX B: PROJECT BUDGET

APPENDIX C: SUPPLEMENTAL FEDERAL ACQUISITION REGULATION (FAR) CLAUSES (IF APPLICABLE)

APPENDIX D: PRIME AWARD TERMS AND CONDITIONS
Knowledge Check

AIS editors

The Q&As at ¶2990.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 2900 has been understood. Note: For the answer key for ¶2990.1, see ¶2990.3, which appears on a separate page (page 2990:5) for testing purposes.

Discussion topics at ¶2990.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶2990.1 Q&As

1. The purpose of the Bayh-Dole Act includes all of the following EXCEPT:
   (a) To promote the use of inventions arising from federal-supported research
   (b) To promote the collaboration between commercial concerns and the general public
   (c) To promote the collaboration between commercial concerns and nonprofit institutions
   (d) To ensure that inventions are used to promote free competition and enterprise

2. Which of the following is TRUE?
   (a) A cooperative agreement is used when the purpose is to acquire property or services for the direct benefit or use of the federal government.
   (b) A cooperative agreement is appropriate when the purpose is to support or stimulate the carrying out of a public purpose, and there will not be substantial involvement between the recipient and the federal agency in carrying out the activity.
   (c) Because the terms and conditions of a federal contract are much more flexible than those required for a cooperative agreement, federal contracts are the usual type of federal funding mechanism for university research.
   (d) The research activity under a cooperative agreement is similar to that of a grant, but with a cooperative agreement there is substantial involvement between the recipient and the federal agency.

3. What is a CRADA?
   (a) Assistance provided to industry-led joint research and development efforts on high risk, high pay-off, emerging and enabling technologies
   (b) A set aside of a certain amount of the budget of several agencies for research to strengthen the role of small business and increase the commercial application of innovations derived from federally funded research
(c) A research agreement between a federal laboratory and a nonfederal partner, which may be an educational institution
(d) All of the above

4. As used in ¶2905, what is UBI?
(a) Unrelated business income
(b) Universal business incubator
(c) Universal basic investigator
(d) Unrelated business investigator

5. SBIR and STTR are programs that aim in part to
(a) Strengthen the role of international contractors
(b) Encourage short-term gains at the expense of long-term goals
(c) Specifically fund humanities projects
(d) Strengthen small business

6. Regulations implemented by which of the following agencies prohibit payments to certain identified individuals and organizations?
(a) OFAC
(b) EAR
(c) ITAR
(d) OMB

7. Which of the following organizations has issued a document regarding obtaining and disseminating biomedical research resources?
(a) National Institutes of Health
(b) OMB
(c) National Institute of Standards and Technology
(d) National Science Foundation

8. Which of the following is NOT recommended for policies regarding institutional research opportunities?
(a) They should uphold the core institutional mission.
(b) They generally should not be considered on a case-by-case basis; instead, a road map should be prepared.
(c) They should not necessarily involve faculty in their development.
(d) They should be re-evaluated on an ongoing, as-needed basis.
9. University collaboration with industry is a good thing because of all of the following EXCEPT:

   (a) It can bring a real-world perspective to the university.

   (b) It can bring together two institutions with similar cultures and missions.

   (c) It can create opportunities for students — both while enrolled at institutions and after graduation.

   (d) It can provide direct translation of university research for the good of the public.

Discussion Topics

1. Many institutions are considering increasing their research activities with industry. Why is this occurring now more than ever, and what unique issues arise in industry collaborations?

2. Discuss appropriate methods to help your legal counsel gain a better understanding of the “law” of sponsored research.

3. Under what circumstances might sponsored research become involved in agreements regarding consulting relationships? What special issues might arise with these types of arrangements?

4. The world of federal sponsored research is increasingly more complex, as there are laws, regulations, circulars, guidance documents, even Grants.gov and federal budget issues. Discuss how you can best stay abreast of changes on all of these fronts.
\subsection{2990.3 Answer Key}

1. (b) To promote the collaboration between commercial concerns and the general public

2. (d) The research activity under a cooperative agreement is similar to that of a grant, but with a cooperative agreement there is substantial involvement between the recipient and the federal agency.

3. (c) A research agreement between a federal laboratory and a nonfederal partner, which may be an educational institution

4. (a) Unrelated business income

5. (d) Strengthen small business

6. (a) OFAC

7. (a) National Institutes of Health

8. (c) They should not necessarily involve faculty in their development.

9. (b) It can bring together two institutions with similar cultures and missions.
PLACE TAB

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Interaction with Auditors
Chapter 3100
Interaction with Auditors

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Denise J. Clark, Associate Vice President for Administration and Chief of Staff, Division of Research, University of Maryland, College Park

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§3101 Introduction

The ability to deal effectively with auditors is critical to an institution’s successful management of sponsored research awards, therefore the interaction between sponsored programs administrators and auditors is explored in this chapter.

Audits are an essential and ongoing part of the sponsored research process. In the age of accountability and compliance, it is highly unlikely that they will disappear from the scene. The chapter was originally developed by Denise Clark of the University of Maryland, College Park. The content has recently been refreshed with the help of Evan Bryant who serves as the audit liaison at Texas A&M University. The chapter provides a highly accessible set of guidelines that will assist research administrators in achieving effective interactions with auditors. The chapter makes the case for the importance of research administrators understanding the audit process and their role in it. It provides a very complete description of the audit process from the initiation of the audit letter through audit resolution and closure.

Throughout the discussion it offers very practical advice to research administrators on how to get through an audit in a manner that benefits the institution. It includes a set of deceptively simple, but highly effective, tips for interviewees. The auditor may not be your best friend, but as Clark wisely points out, there is not much to be gained by treating the auditor as “the enemy.”

This chapter will continue to respond to the information needs of research administrators over time through the addition of new material. Future updates will contain revisions, additions, and enhancements to §3105, as appropriate. Content added to other sections of the chapter will provide readers supplementary discussions of related topics (at §3120), practical tools (at §3130), case studies (at §3140), and trends data and other related statistics (at §3160). A “knowledge check” containing Q&As and discussion topics is included at §3190.
Interaction with Auditors
Denise J. Clark
Assistant Vice President for Research Administration and Advancement
University of Maryland, College Park

Technical updates provided by Evan Bryant, Texas A&M University

Audit, auditor, auditee. … Internal, external, program specific, agency specific…. Entrance conference, exit conference. … Scope, population. … Internal controls. …. Extrapolation. … Material weakness, immaterial weakness. … Reportable condition, immaterial finding, material finding.

These are words that are exchanged regularly by research administrators, and all relate to audits. Audits play an essential role in the administration of sponsored programs and serve various, often critical, purposes. For these reasons it is necessary for office of sponsored programs (OSP) personnel to understand the relevant terminology and processes relating to audits and interactions with auditors. This chapter provides such an overview.

Key Terms
Associated audit terms and definitions to make part of one’s vocabulary include the following:

- **Agency-specific audit**: an audit conducted to ensure compliance with guidelines, regulations, and agency goals
- **Audit**: examination of records or financial accounts to verify accuracy
- **Auditee**: organization to be audited
- **Auditor**: person qualified and authorized to examine and verify records (could also be an “audit team”)
- **Entrance conference**: held between auditors and the institution as a means to launch an audit and discuss audit objectives, scope, timing and logistics
- **Exit conference**: held upon completion of an audit to discuss the process, observations, and outcomes
- **External audit**: conducted by auditors external to the institution
- **Extrapolation**: a means of drawing conclusions about an entire population based upon sample testing
- **Fieldwork**: a review of official records and supporting documentation, usually performed on-site
- **Immaterial finding (weakness)**: an instance of noncompliance with applicable laws regulations, or agreement terms and conditions of an inconsequential nature
- **Internal audit**: conducted by auditors employed by the institution
- **Internal controls**: verifiable mechanisms an institution has in place to provide
reasonable assurance of compliance with applicable laws, regulations, and policies
◆ Letter of engagement or audit letter: the letter sent by the audit team officially notifying the institution of an upcoming audit
◆ Material finding (weakness): an instance of noncompliance with applicable laws, regulations, or agreement terms and conditions of a substantive nature
◆ Population: defines the range and type of files associated with the audit
◆ Program-specific audit: conducted to ensure the institution has a system of internal controls to properly manage a particular award in accordance with sponsor guidelines
◆ Questioned cost: level of uncertainty or doubt as to allowability or appropriateness of a cost
◆ Reportable condition: internal control deficiency or condition of noncompliance that is significant enough to be included in the audit report
◆ Scope: defines the purpose and parameters of an audit
◆ Scope document: details in writing the purpose, objectives, and intent of the audit

### 3105.2 Overview of Audits

Does preparing for one audit prepare an institution for all audits? No, each audit differs from the next depending on the auditors, the purpose of the audit, and the scope of the audit. Internal audits differ from external audits and single audits differ from agency audits. (For further discussion of single audits, see Chapter 1300.) Various types of audits and their purposes are discussed below.

◆ Internal audits are conducted by in-house personnel (usually located in the institution’s office of internal audit) for the primary purpose of assuring that policies and procedures are in place, sufficient, and followed effectively and efficiently in order to maintain compliance with associated laws, regulations, and policies. The role of an internal audit office is to work in partnership with management to assess risk and evaluate the effectiveness of associated internal controls and recommend enhancements to procedures and processes. Internal audit offices help facilitate compliance for the institution by assessing the probability and impact of noncompliance and by recommending improvements and enhancements to internal controls. Establishing an internal audit office is, in itself, an internal control. Frequently internal audit offices have a reporting relationship to the institution’s board of trustees.

◆ External audits are conducted by outside audit firms, agency representatives, or representatives of a federal office of inspector general (OIG). One of the most common external audits in research administration occurs in relation to the Office of Management and Budget (OMB) 2 CRF 200 Uniform Guidance Subpart F (UGF) – Audit Requirements. The scope of a UGF audit is to determine an institution’s compliance with federal regulations. The audit is generally
conducted by private audit firms hired by the institution. The frequency and depth of the external audit differs depending upon variables such as the volume of an institution’s total research expenditures, size of the institution, and complexity of the institution’s portfolio. A program or topical area-specific audit is initiated by individual granting agencies and is conducted by personnel within the program area, the grants and agreements or contracts area, or the OIG area. A program-specific audit is a means to evaluate the progress of a particular program or award while also assessing the institution’s related internal controls. A topical area-specific audit may include one or many awards and the evaluation of internal controls is usually focused on adherence to the specific topic or topical area of interest.

Although each audit is separate and distinct from any other, there are common threads that occur with every audit. The purpose of an audit is to determine compliance with program and regulatory requirements. In doing so, audits focus on internal controls and assessments of risk.

The typical audit consists of evaluating the effectiveness of internal controls within key operations and testing compliance with institutional policies and procedures and related adherence to applicable external regulations.

**Internal Controls**

What are internal controls? Internal controls are demonstrated means or methods used to provide reasonable assurance of compliance with applicable laws, regulations, and policies. By establishing and implementing sound internal controls, an institution seeks to create an environment where the primary objectives are compliance, reliability, integrity, and the safeguarding of the institution’s assets. Examples of internal controls include the following:

- Promoting ethics and integrity
- Maintaining adequate knowledge base
- Operating efficient and effective financial systems
- Developing and implementing policies and procedures
- Imposing sanctions for noncompliance
- Providing training and ongoing communication
- Monitoring, observing, and testing daily operations
- Conducting periodic performance reviews

**Preparation for an Audit**

Success in interacting with auditors depends upon how well prepared the institution is. A lack of preparation can cause a perceived atmosphere of uncertainty and inefficiency. OSP personnel can eliminate uncertainty, suspicion, and skepticism by being as prepared as possible and creating an environment of confidence and assurance. Having the knowledge of and ability to discuss the subject matter of the audit
appropriately while providing verifiable documentation of adherence to internal controls is a key, strategic offense. In preparing for an audit, an OSP should consider the following activities:

◆ **Develop a list of acronyms, both institutional and governmentwide.** Consult the standard universal acronym list provided by the Federal Demonstration Partnership (FDP) and supplement it with an internal institutional list (see the FDP Web site at www.thefdp.org). Include in the institutional section, any relevant financial system acronyms.

◆ **Create a list of commonly used terminology and associated definitions as reflected in internal policies, procedures, and systems.** Definitions within financial systems often dictate corresponding terminology cited in internally related policies and procedures. Since vendor-supplied systems may differ from institution to institution, so will the terminology and hence the need to document system-driven terms.

◆ **Review related federal regulations and make sure the institution has internal implementing policies and procedures in place to monitor compliance.** After the initial review, it is a good practice to perform periodic “re-reviews” of those policies and procedures to ensure any updates necessitated by changes in federal regulations or institutional policies have been captured and applied.

◆ **Review all related internal policies and procedures and determine:** Are they current? Do they match the needs of the university? Are they reasonable for the quantity of the work flow? Do they need to be updated to reflect electronic research administration processes? Have they been reviewed, approved, and accepted by the appropriate institutional officials? Have they been communicated to the research community? Are they readily available to all research administration-related parties?

◆ **Maintain a research-related website and determine:** Are links to all federal laws and regulations posted? Are links to all agency websites posted? Are links to all internal policies, procedures, and forms posted? Are links to all associated training opportunities posted? Perform a periodic review to confirm that all links are operational.

◆ **Establish an internal research community listserv.** This will facilitate communication with the institutional representatives responsible for various aspects of research administration. Utilize the listserv to announce new or revised regulations or policies. Establish a procedure to monitor the listserv participant list to ensure all pertinent parties are subscribed.

◆ **Provide ongoing education to the campus community through effective training.** Creating training programs enhances the knowledge and understanding of research-related laws, regulations, and policies and strengthens compliance. Training initiatives can be delivered by utilizing various methods and tools. The means used to communicate the necessary information to the research community should be well documented. To demonstrate delivery of training
programs, retain copies of training announcements, agendas, and presentation and handout material as well as participant attendance sheets. Training opportunities can be internal and external.

- **Gain familiarity with prior audits and their associated processes.** Reviewing prior sponsored program-related audits offers insight into the flow of the audit process. Read all available file documentation. Begin the assessment by reading the notification of audit letter or letter of engagement. Give particular attention to the scope identified in the engagement letter and

  - determine how the population and sample selections were chosen;
  - determine if there was an associated narrative;
  - review the current status of population and sample selections;
  - evaluate the current status of the files involved and look for any connected subsequent events; and
  - find out what institutional representatives were involved.

Read any file notes and correspondence connected to the fieldwork, including information related to any interviews and determine the following:

- Who was interviewed?
- How were they selected?
- What questions were asked?

Focus on the draft report and any subsequent versions of the audit report. Pay close attention to how the versions differ — what came out, what went in. Carefully read all sections of the final report and

- concentrate on the observations, findings, or weaknesses;
- take into account any management responses or corrective action plans;
- follow up to determine the status of the implementation of cited, modified, or enhanced internal controls; and
- confirm that all corrective actions have been implemented.

If there are any outstanding items still pending, obtain status updates, including estimated dates of completion. Continue monitoring all pending actions until final resolution has been achieved.

- **Review other institutions’ single or UGF reports.** A review of the data collection forms and any corresponding reportable conditions, weaknesses, or findings and associated management responses cited within the full report can provide insight into topical areas of national interest.

- **Review the OMB Compliance Supplement.** Each year the OMB publishes a Compliance Supplement to guide auditors in the conduct of single and UGF audits. It identifies important compliance requirements the federal government expects to be considered as part of an audit.
◆ Review other institutions’ sponsored programs administration-related websites. In conducting a review, be sure to consider the ease of navigation, formatting, and placement of related policies and procedures. Peruse the policies and procedures of peer and aspirant institutions. Compare philosophy and strategies and consider possible enhancements.

◆ Keep abreast of agency-specific audits by reviewing agency OIG reports. OIG reports are usually available on agency websites. These audit reports can provide awareness into potential areas of federal agency concerns. After researching audit reports, assess the institution’s strengths and weaknesses associated with the relevant internal controls. (For more on OIG audit reports and OIG audit work plans, see ¶3120.1.)

◆ Conduct a self-assessment. Conducting a self-assessment allows the institution to play “devil’s advocate” by performing an internal evaluation of the effectiveness of oversight and monitoring programs. The purpose of the assessment is to evaluate adherence to procedures to ensure quality levels and efficiency in relation to implementation of policies and procedures. A self-assessment is a self-audit and can be accomplished through various means and at various times. One example is to use system reporting tools to build standard queries that can be published and subsequently executed on demand by central or departmental administrators. Such queries can highlight awards or areas that may necessitate further review or oversight. Sample queries could cover

◆ active projects with expired term dates;
◆ projects in overdraft status;
◆ projects with subrecipients;
◆ projects with cost sharing commitments;
◆ projects with direct charges of a normally indirect nature;
◆ projects with past due or unbilled receivables;
◆ projects with actions pending sponsor approval; and
◆ projects in advance account status.

◆ Conduct a risk assessment. A risk assessment is a proactive approach used to identify unwanted surprises. It is a means to evaluate or gauge potential exposure and related damages the institution would face for a claim of noncompliance. It is a process used to assess and judge possible adverse events by measuring research administration knowledge and the effectiveness of procedural implementations. The degree of risk associated with a given topic is usually defined in financial terms, but damages can be more than monetary and can be based upon real or perceived noncompliance. Risk assessments are the identification and analysis of the probability of something going wrong. Risk priority is measured in terms of the consequence and likelihood of something going wrong. Indicators of risk where risk assessment may be warranted include the following:

◆ Fund balances consistently in overdraft

...
◆ High volume of cost transfers
◆ Inexperienced or ineffective research administrators
◆ High frequency of delinquency in meeting deliverables
◆ Continual delays in negotiating agreements
◆ Staffing constraints or reductions in key positions

When assessing the risk, prioritize the areas needing focus by measuring the likelihood and potential impact of the following due to negative exposure:
◆ Loss of institutional trust
◆ Loss of public trust
◆ Loss of sponsoring agency trust
◆ Loss of current or future funding

13105.4 Start of the Audit
Audits can occur at any time and with little advance notice. The usual means of contact commencing an audit is a notification of audit letter or letter of engagement. (An overview of the audit process is included as Figure 1.)

Audit Letter
The audit letter, sent by the office of internal audit, the authorized representative of the external audit firm, or the federal agency, frequently is addressed to the vice president or vice provost within the institution. The letter should state
◆ the program or topical area to be covered during the audit,
◆ the estimated start and end date,
◆ the anticipated amount of time for fieldwork, and
◆ the date, time, and location for the entrance conference.

The letter also should provide the names and contact information of the auditor representatives.

Audits should be managed by an institution’s central sponsored programs administration. Principal investigators (PI) and departmental administrators should be alerted to the possibility of receiving a request regarding an audit directly and if this occurs, encouraged to engage central administration immediately.

Central File. Receiving an audit letter is the first official notice pertaining to the audit and at this point, a central management file should be established. Copies of documentation produced, reviewed, or tested throughout the audit process should be maintained in the file, as well as other material. The file should be retained for institutional purposes and be readily available for reference during and after the audit.
Figure 1: Audit Process at a Glance

1. Audit Letter
   After receiving the audit letter, the institution should do the following:
   • Appoint a lead individual
   • Glean particulars of audit: scope, start/end dates, etc.
   • Establish central file
   • Prepare for entrance conference
   • Inform all potentially involved parties/offices

2. Entrance Conference
   During the entrance conference, the institution should do the following:
   • Understand scope
   • Discuss overview of audit process
   • Establish audit timetable
   • Establish audit reporting process
   • Begin to respond to data requests
   After the entrance conference, in preparation for the audit fieldwork, the institution should do the following:
   • Assign auditor work space
   • Hold staff meeting
   • Inform all potentially involved parties/offices not previously notified

3. Audit Fieldwork
   During the audit fieldwork phase, the institution should do the following:
   • Initially meet with on-site audit team; introduce lead institutional official
   • Respond to request for assistance package
   • Respond to data requests during sample selection and testing phase
   • Identify, analyze, and maintain copies of all relevant documentation
   • Document all communications
   • Involve internal audit, as appropriate
   • Prepare staff, PIs, others for interviews with auditors
   • Monitor and respond to any possible questioned observations
   • Keep audit on schedule and hold update meetings

4. Draft Audit Report
   After receiving the draft audit report, the institution should do the following:
   • Carefully review the document
   • Meet with auditors to discuss the report’s contents (wording, tone, accuracy, observations, opinions, findings, recommendations, etc.)
   • Prepare management response, including any necessary corrective action plan(s)

5. Exit Conference
   During the exit conference, the institution should do the following:
• Engage in an open discussion with auditors about the entire audit process
• Provide institutional feedback

6. Final Audit Report

After receiving the final audit report, the institution should do the following:
• Carefully review the document
• Review the report with staff members
• Discuss observations/findings/recommendations with affected parties
• Distribute to management
• Review management response and corrective action plan
• Appoint someone to oversee corrective action plan and proceed with implementation
• Periodically monitor corrective action plan progress

7. Follow-Up

Approximately 6 months after receiving the final audit report, the institution should do the following:
• Meet with the person appointed for oversight for follow-up review to verify implementation of correction action plan
• Prepare for the possibility of additional testing or interviews as appropriate
• Communicate with auditors indicating corrective action plan has been completed
• Check all record retention periods
• Update files as needed
• Review corrective plan for necessary updates to policies, procedures, etc.

Lead Individual

Upon receipt of the notification of audit letter, a lead individual responsible for the audit and for serving as the main liaison with the auditors should be appointed. This is one of the most important steps in the audit process. This person should be a topical expert in the area of the audit’s scope and should be knowledgeable regarding internal policies and procedures. Most, if not all, interactions with the auditors should occur through this lead individual. Appointing a lead liaison has many benefits, and therefore careful consideration should be given when determining who this person should be. This individual will be the point person who will not only represent the OSP but also represent the institution.

There are basic characteristics that this individual should possess. Ideally the individual will have been actively involved in previous audits. Experience is an invaluable asset and may be one of the most significant attributes one can bring to the process. This individual should be a subject matter expert and should possess knowledge of the related federal regulations, agency-specific terms and conditions, and associated institutional implementing policies and procedures. Consequently the scope of the audit plays a fundamental role in determining the lead individual.

In addition to subject matter expertise, an institution should consider communication methods, style, and ability as additional factors in selecting the lead individ-
Since most of the interactions with the audit team will be impromptu, frequent, and verbal, strong oral communication and interpersonal skills are vital. Once the individual is identified, he or she should assume immediate day-to-day responsibility for the audit and begin the preparation and strategy development in anticipation of the entrance conference.

**Entrance Conference**

The audit entrance conference serves many purposes. Most notably, it brings together the pertinent parties and provides an opportunity for all involved to review the scope of the audit as well as discuss an overview of the process, the projected timetable, and the reporting expectations. The conference begins with introductions of the main participants and usually is the first face-to-face meeting to occur. The lead responsible parties are identified at this time and it is essential that the institution’s appointed lead representative be present and be an active participant.

At the conference, OSP staff should try to gain an understanding of the auditors’ familiarity with sponsored programs administration by inquiring about their backgrounds and experiences with audits of higher education institutions. The tone, tenor, and demeanor of this initial interaction may set the stage and pace for the entire audit. Composure and self-control are fundamental and crucial attributes to demonstrate at this meeting and will be the foundation for establishing a professional working relationship with the auditors.

**Scope Document.** After the opening introductions, a scope document should be presented and copies made available by the audit team. The scope document should detail the purpose, objectives, and intent of the audit. This document becomes the reference point for any questions and requests for clarification during the audit, and therefore it is very important that any questions regarding the proposed content of the audit be addressed at this time.

In order for the audit to run as smoothly as possible, the scope needs to be well defined and thoroughly discussed at this first meeting. As the scope of the audit is discussed, clarity becomes the key focus. The scope determines the parameters of the audit, and it is essential that all parties clearly understand those parameters. The scope is the broad overview of the intent of the audit, and topical areas are lower-level details within the scope. For instance, cost sharing may be cited as the scope of the audit; topical areas might encompass the following:

- Related policies and procedures
- Tracking and reporting mandatory versus voluntary cost sharing
- Mandatory cost sharing agreement requirements
- Treatment of mandatory and voluntary cost sharing in the facilities and administrative (F&A) proposal
- Subrecipient monitoring of cost sharing commitments
- Related financial systems and controls
These topical areas should contain such detail that both parties understand what areas of internal controls will be evaluated and what source documentation will be tested. If there are questions regarding any topical area, the OSP should ask for clarification and refine the expectations at this point. A clear, comprehensive understanding of the topical areas of focus will help the institution prepare for the on-site fieldwork stage (see page 3105:12).

**Request for Information on Internal Controls.** Once the scope and topical areas have been well defined, the audit team will begin the request for information and data. Before fieldwork testing can commence, documentation of internal controls related to the scope are generally requested and reviewed by the audit team. The information and data request often includes current policies and procedures that are applicable to the scope of the audit as previously defined in the notification of audit letter. This is one of the primary requests for information and data and allows the audit team to become familiar with the related operations of the institution.

In reviewing the documents relating to internal controls, often the organization’s written procedures, the audit team will first identify and analyze the internal controls within processes. The purpose of this evaluation is to determine the adequacy, effectiveness, efficiency, reliability, and credibility of the process the institution has in place to assure compliance with laws and regulations associated with the audit’s scope. Written procedures are the most relevant form of source documentation because they describe the detailed processes the institution has designed and implemented to provide reasonable assurance that the stated objectives of adequacy, effectiveness, efficiency, reliability, and credibility are achieved.

The fieldwork testing is applied to determine the effectiveness of internal controls. The testing of internal controls is the means of validating the institution’s ability to oversee and monitor transactions related to the audit’s scope.

**Project Timetable.** Another detail to be discussed at the entrance conference is the project timetable. The timetable should include

- an indication of when the requests for information and data will be issued,
- when the on-site fieldwork is projected to begin and end,
- when a draft audit report will be available, and
- when a final report is expected to be issued.

Time lines should be established, the estimated milestone dates should be discussed, and outer boundaries should be agreed upon at this point.

It is crucial that the institutional lead pay close attention to the anticipated target dates. In discussing target dates, the lead individual should consider the staffing impact associated with each milestone and allow adequate time for institutional preparation and review while avoiding unnecessary delays. The audit should not be prolonged by establishing long-term time lines. However, an institution should consider how long it will take to do the following:

- Prepare the necessary parties for the audit
- Review the related federal regulations
◆ Review the related internal controls
◆ Pull and review requested sample files
◆ Pull, review, and copy sample transaction selections
◆ Prepare for and conduct potential interviews
◆ Prepare management responses to the draft audit report

**Reporting Process.** The last objective of the entrance meeting is to engage in a discussion pertaining to the reporting process. It is important to emphasize that the first iteration of any observations, recommendations, or findings is a draft report — a preliminary document — and therefore the audit team needs to share it with the lead responsible individual first. There should be a mutual understanding regarding the progression of the reporting process and the drafting of the report as a collaborative process that includes a sharing of and dialogue concerning items of potential concern.

Clear parameters and boundaries surrounding the audit process need to be established, well documented, and thoroughly understood. The entrance conference is an opportunity to discuss any ambiguities and uncertainties pertaining to the method of communicating preliminary observations. Since the draft report may contain issues that could be resolved by the institution’s providing additional explanations or documentation, it is imperative that the lead representative have the opportunity to review and comment on the draft prior to the report being distributed. If any misconceptions, misinterpretations, or misunderstandings occurred during the course of the fieldwork, resolution needs to happen at this early stage in the reporting process.

**Preparing for On-Site Fieldwork**

At the conclusion of the entrance conference and in preparation for the on-site fieldwork, the audit team continues to request data. Preliminary work is furthered by the auditors requesting and obtaining an overview of the institution’s processes for sponsored programs administration and possibly reviewing narratives and flowcharts, conducting interviews with key research administration staff, and examining internal documentation of processes and related policies and procedures.

**Auditor Work Space.** Prior to the onset of the fieldwork, a designated auditor working space needs to be assigned. If possible, it is preferable that this space be located away from the mainstream, day-to-day activities and routine operations of the office. Employees’ working environments should not be impacted, compromised, or disturbed. An audit does not replace, defer, or stop the regular work flow associated with proposal preparation, award negotiation, financial administration, etc. relating to sponsored programs.

To achieve work flow continuity and to sustain the same level of valued customer service to internal and external research community constituents during the audit, it is essential to safeguard against disruptions created by the audit fieldwork process. Preserving the privacy of all employees and their work areas will assist in meeting this objective. Having the audit fieldwork conducted away from the center of the normal office functions and everyday business traffic will reduce interference.
In addition, the space that is assigned to the auditors should be in an area that is equipped with appropriate office functionality including adequate desktop working surfaces, telephone access, and Internet connectivity. It is likely that the audit team will need to reproduce relevant file documentation as part of the fieldwork and, accordingly, easy access to a photocopier/scanner will help to diminish disruptions and distractions.

**Staff Meetings.** Prior to the arrival of the audit team, the OSP should conduct an informational meeting with all staff and

- explain the purpose of the audit and the expected time line;
- describe the fieldwork process and explain staff’s involvement;
- make clear the protocol to be followed while the audit team is on-site;
- reinforce the need and importance for all communications to be channeled through the lead designee and introduce this person;
- emphasize the fact that if staff is approached individually for information, whether oral or written, he or she needs to refer the auditor back to the institutional lead person (Questions and subsequent answers could be taken out of context when staff is approached individually.); and
- remind staff to be mindful of the auditors’ presence in the office while continuing to focus on daily responsibilities.

**Affected Parties/Offices.** The OSP should identify all campus-related parties/offices that are impacted by the scope of the audit and make sure they are aware that an audit has been initiated and understand the potential impact on the organization. All parties/offices should be apprised of the scope of the audit and advised as to the estimated extent of their involvement. For external audits, the OSP should remember to coordinate with the institution’s office of internal audit.

13105.5 **Conduct of the Audit**

On the first day of the fieldwork, the OSP should become acquainted with the on-site audit team and introduce them to the office staff. If there are audit team members present that were not at the entrance conference, the institution’s lead individual should review with them the scope document and timetables so everyone involved with the collection, testing, and evaluation of data is performing under the same principles.

The audit team should be given a general overview of the building that includes the locations of such areas as restrooms, cafeterias, snack bars, and vending machines. Making the audit team aware of the building and surrounding facilities will help eliminate questions and prevent distractions to office employees. Keeping the audit activity as separate, distinct, and independent from the daily work environment as possible will help maintain stability in normal operations and work flow.

The audit team should be supplied with a copy of a list of acronyms and commonly used terminology and associated definitions. Providing such reference materials will assist in decreasing the chances of possible misunderstandings.
Sample Selection and Testing Phase

Using the scope and population as defined in the engagement letter and refined during the entrance conference, the audit team will present a “request for assistance package.” The package contains a listing of documents to be produced including a sample selection as identified by the audit team. The sample selection is an extraction of the total population and becomes the test base. Selecting this sample allows the audit team to examine, on a test-case basis, the institution’s compliance with the requirements and standards applicable to research administration. Depending on the sampling methodology, auditors may draw conclusions about the entire population based on test results of the sample. This is referred to as an “extrapolation.” The sample is a test of the whole population and extrapolation takes the results of the sample and draws conclusions for the entire population.

Once the auditors have selected a sample and requested documentation, the OSP should pull all relevant files. Prior to delivery of the files to the audit team, the OSP should perform an analysis of the files and review the sample selections on behalf of the institution. All files should be in order and maintained in accordance with internal filing procedures, and all papers within the files should be relevant. The files should be well organized and properly structured to help facilitate the review process. Since the files may be in review for weeks or even months, placing an “out” card or other form of notification in the original filing site will serve as a means of communicating to staff the location of the file, should access to it be required for normal daily operations.

The testing phase requires the auditors to examine documents and, when necessary, obtain explanations. The chosen samples serve as illustrations of the effectiveness and adherence to internal controls. A common form of a sample selection is a representation of individual awards. After reviewing the chosen samples, auditors frequently request additional records and/or documentation. Documents often requested include transactional level-based supporting documentation and are used to test adherence to internal controls. Examples of such documentation include journal entries, cost transfer requests, cost sharing documentation, effort certifications, payroll appointment forms and records, purchase orders, and financial and technical reports. These forms of records and documentation are typically maintained in various files.

Oversight of Relevant Files. The OSP should be careful not to allow original source documentation to leave the office; if necessary, a copy of the documentation should be provided to the auditors. In addition a copy of all documentation should be made for the central file. For the record and for future reference, each document should be dated, initialed, and reviewed prior to presentation to the audit team. It is important for OSP staff to understand the applicable federal and institutional policies pertaining to the document selections. Staff should be conscious of what information is requested and what information is being presented; testing provides the evidence necessary for the audit team to draw conclusions and derive subsequent opinions.
Documenting Communications
Throughout the audit, the OSP should
◆ document all communications, written and verbal;
◆ take and date file notes of all verbal communications, including on-site meetings and telephone conversations (Many times, clarifying conversations occur subsequent to the auditors’ evaluation of the transactional level-based records.); and
◆ maintain a reputation for credibility and provide information that is consistent with what was requested, but no more or no less.

The OSP should provide access to evidential material as requested and make sure the request is completely understood by both parties. An OSP should thoroughly analyze the request to make sure all references to federal regulations are current and cited and tested appropriately. For example, upon review of a multiyear grant from the National Institutes of Health (NIH), the auditor might test payroll transactions against an outdated NIH salary limitation and therefore come to an erroneous conclusion. Maintaining an open dialogue and discussion allows issues such as these to be addressed and resolved before they become auditor-documented conclusions.

Interviews
It is not uncommon for audits to include interviews. Interviews should not be impromptu conversations between the auditors and selected institutional personnel. All interviews should be coordinated by the institution’s lead audit person. Prior experience in this area is invaluable. Frequently the audit team will first interview key personnel within the sponsored programs offices to learn more about the operations and gauge management’s knowledge of the topical areas. The interviews further provide the auditors with an understanding of management’s characteristics and influence over the organization.

An OSP should prepare the affected research community by arranging mock interviews to be used as a “dry run.” All key personnel and associated departmental administrative managers should be part of a dry run. Questions should be anticipated and a checklist of potential scope-related inquiries should be developed. Potential interviewees should be told about the purpose of the audit and the intent of the interview process. Instructions on how to craft responses to questions asked during the interview should be provided.

PIs associated with the chosen sample selection are potential interviewees. If the auditor requests an interview with a PI, the PI should be asked to prepare for the interview by reviewing supporting source documentation such as personnel appointment forms, monthly payroll records, labor distribution and redistribution records, and effort certifications. In the review, related documentation such as award budgets, budget justifications and narratives, and financial and progress reports should also be considered. A review of related policies, procedures, and source documentation can help refresh the potential interviewees’ recollections, as some audits may include a review of past years’ activities.
PIs and other potential interviewees should be prepped for the interview and provided some interview tactics as included in Figure 2 (see page 3105:16). It is important to remember that the institutional lead individual should not only be present during interviews, but should intervene when it appears that the interviewer(s) and the interviewee are not effectively communicating and to make sure there is little room for misinterpretations between parties.

Interviews may be conducted with various central and departmental sponsored programs personnel. Interviews can bear heavily on the conclusions and outcome of the audit and since the interviews are verbal, the source documentation is an auditor’s written transcript of the discussion. Misinterpretations potentially can occur on both sides. The interviewee may not understand the background scope of the audit or the intent of the question and may reply out of context. In doing so, the auditor may derive a conclusion based on a partial or nonsubstantive, nonsubject-matter answer. Therefore it is important that the lead individual always be present and take detailed notes during any interview.

At any point, if the lead individual gets the impression the interviewee and the auditor are not on the same wavelength, he or she should request an opportunity for clarification of either the question or the response. This allows for consistency and reliability in the information generated during the interview. For the institution, this will also be beneficial at the management-response stage (see page 3105:18). Interviews become part of the official audit source document and are sometimes referred to in the audit report. To effectively respond to citations regarding interviews and to clarify and/or expound on the institution’s position, every effort should be exhausted to ensure that the interview process is not open to interpretation.

**Ongoing Involvement**

During the course of the fieldwork, the OSP should remain involved by

◆ observing the daily activities of and requesting daily status updates from the audit team;

◆ making a concerted effort to keep the audit on schedule; and

◆ periodically requesting a listing of any potential questioned costs or findings.

Some issues can be cleared up quickly and observations or findings obviated if the auditors ask for follow-up explanations upon preliminary discovery of issues. Sometimes conclusions based on fieldwork are not taken in proper context or are in error, misleading, or trivial in nature. Bringing these to light early in the process allows the institution the opportunity to present additional justification and may subsequently resolve any issues raised.

In addition OSP staff should be mindful of possible “scope creep.” Scope creep occurs when the audit starts to drift away from the original defined parameters, and questions or requests for documentation extend beyond the stated boundaries as agreed upon in the entrance conference. In such an instance, OSP staff should refer back to the entrance conference materials and discuss the defined scope with the audit team. Should the discussions result in an impasse and resolution with the audit...
Figure 2: Tips for Interviewees

Interviewees should be reminded about the following:

- During the interview, listen to the question. To accomplish this, do not interrupt, do not anticipate the question, and do not finish the interviewer’s question. If the question is in relation to hard-copy documentation, ask for time to see and review the documentation prior to responding.

- Think first, speak second. Take as much time as you need to adequately refresh your memory before responding to a question. Suppress the desire to respond immediately.

- Before speaking, relate the question to the applicable federal law or regulation and the institutional implementing policy or procedure.

- Respond honestly and truthfully based on transactional file documentation, personal knowledge, and experience.

- Suppress the inclination to explain everything you know about a topic and to demonstrate to the auditors your vast knowledge base.

- Articulate your answer mentally before verbally responding to the question. Think about the statement you would like to make before you make it. Keep your answers short and concise.

- Remain calm and do not personalize the interview. Set emotions aside.

- If, after responding to a question, clarification is requested, cite the source of the information provided and maintain your confidence.

...
‘Questioned’ Costs
Concerns surrounding any potential “questioned” costs should be addressed as soon as they arise. Questioned costs are those costs that through testing to date leave the auditor with a level of uncertainty or doubt as to their allowability or appropriateness.

Questioned costs can arise due to real or perceived
◆ noncompliance with a federal law or regulation or agency term and condition,
◆ noncompliance with internal controls, or
◆ inadequate supporting documentation.

Should a questioned cost be identified, the OSP should request that the auditor narrow down the rationale for the opinion. The auditor should be asked to supply the reference to the applicable law, regulation, agency guideline, or internal control that was used, and the citation should be reviewed to determine if the most relevant or most recent version is being used.

The audit team should be asked further to cite the area of perceived violation whether it involves a federal regulation, agency term and condition, internal control, or occurrence of inadequate documentation. The OSP should review all source documentation, federal regulations, or agency terms and conditions in order to assess the issue. Any conclusion an OSP comes to should be documented and retained in the file.

The questioned costs should be discussed with the audit team. The OSP should share its conclusions and relevant supporting source documentation with the audit team and ask for the costs in question to be reviewed again. If the institution does not provide the necessary documentation in support of the costs charged to an award, the auditor may consider the cost questionable and disallow the expenditure. Therefore maintaining file documentation — including a written justification supporting decision making for actions taken during the life of an award — is not only prudent management, but also provides the necessary backup to support administrative actions and decisions questioned during an audit.

Draft Audit Report
After analyzing, interpreting, and documenting information obtained during the audit, the audit team will prepare a draft report. The draft may include auditor observations not previously disclosed. Therefore it is imperative that the draft report receive careful review by the institution. Upon review, if any findings, reportable conditions, or questioned costs are cited, the OSP should meet with the auditors and inquire about such items, as follows:
◆ Ask not just what the opinions, findings, or conclusions are but also how they were arrived at.
◆ Question the decisions made leading up to the conclusion.
◆ Inquire as to how the supporting documentation provided leads to the conclusion.
◆ Revisit the original request for and sample selections to formulate an institutional opinion and response.
◆ Review file notes from status meetings.
◆ Open a dialogue with the audit team; deliberate both sides’ positions.
◆ Justify responses with supporting documentation and references to applicable rules, regulations, and/or internal controls.
◆ Be persistent in stating the institution’s position; maintain confidence.
◆ Attempt to resolve identified issues and reach agreed-upon corrective action plans.

**Management Response.** Before a final report is issued, a management response to the draft report is requested by the audit team. A management response is an evaluation and statement of the institution’s position in response to the auditors’ observations, recommendations, and findings. With respect to each issue raised in the report, there generally are three components for consideration when constructing the management response:

1. Does the institution agree or disagree with the issue?
2. What is the corrective action plan to address the issue?
3. What is the target date for implementation of the corrective action plan?

With respect to corrective action plans, the institution should use sound judgment in articulating the management response. It should formulate corrective action plans based on the draft report and ensure that corrective action plans are reasonable and attainable within the time frame cited. The cost of the corrective action plans should not exceed the expected benefit. An institution should be flexible in determining the necessary resources and approach, taking into consideration changing resource availability. A corrective action measure needs to provide reasonable, not absolute, assurance that an objective will be accomplished. A corrective action plan should be an appropriate response to the findings. If during the drafting of the report mutually agreeable conclusions were not arrived at, it is imperative that the institution restate, with supporting details, its position.

**Exit Conference**

The final step in the on-site audit process is an exit conference. The exit conference brings back together personnel from the entrance conference and serves as a means to discuss the entire process, observations, outcomes, and management responses to determine if any follow-up action is necessary or required. A frank, detailed discussion surrounding any issues that arose during the audit should occur and should include any indications or intentions for follow-up actions. Institutional feedback at this point in the process is important and can help facilitate and improve future audit interactions.

**3105.6 Final Audit Report and Follow-Up**

The next phase of the audit is the delivery of the final report. Typical sections of the report are
◆ an executive summary;
◆ a restatement of the scope, objectives, and internal audit procedures;
◆ subsequent observations and recommendations; and
◆ management’s response and action plans.

The final report may also include a summary of the audit process undertaken. The summary of the process includes a listing of the audit procedures performed and the outcome of each, including any observations, findings, or reportable conditions. (After each finding or reportable condition, management’s action plan or corrective action plan is listed, with an anticipated date of completion.) The report is distributed to management.

After the final report has been issued, the institution should do the following:
◆ Review the audit process and the report with staff members and talk about lessons learned.
◆ Discuss any observations, findings, or recommendations with all affected parties.
◆ Review the management response, including corrective action plans and implementation timetables.
◆ Develop a plan for periodic oversight and monitoring of progress towards meeting the management response goals.
◆ Appoint parties responsible for each outstanding observation and assign interim expected completion dates for any corrective action plans, including relevant training to the research community.
◆ Provide a system to track follow-up measures until all corrective action plans have been fully implemented.

Follow-Up Review and Remediation

Typically the audit will include a follow-up review that occurs approximately six months after the issuance of the final report. The review is conducted to verify that the institution has implemented all stated corrective action plans. This follow-on review may include additional testing and/or interviews as a means of verification. A letter indicating whether all corrective action plans have been satisfactorily implemented will be issued by the audit team. If the status of the implementation of the corrective action plans is found to be unsatisfactory, other management responses may be required, as well as another follow-up review. When all plans are found to be implemented satisfactorily, the audit is complete and any findings are considered to be remediated.

Record and File Retention

After remediation, on-site follow-up actions need to be completed. Audits may have an impact on record retention periods. All terms and conditions associated with record retention requirements for all awards should be reviewed. This step is extremely important for any awards in which the term date has expired. It is not uncommon
for a record retention clause to include a statement extending the expiration date of the retention period and access requirements beyond the normal period due to litigation, claims, or audits. File notations and system data elements should be updated accordingly. Since the sample selected files and supporting source and transactional documentation used in the audit are original, official records of the institution, all such files and documents should be returned to their proper locations.

The management-constructed audit file (the “central” audit file) should be reviewed for copies of the following items:

- Letter of engagement
- Notes from the entrance conference
- Notes or narratives from any interviews conducted
- Listing of all policies and procedures reviewed
- Listing of the population and sample selections
- Source documentation requested and/or tested
- Drafts of the audit report
- Drafts of management responses/corrective action plans
- Notes from the exit conference
- Final report
- Follow-up review actions
- Resolution

Corrective action plans should be reviewed for any necessary updates to institutional policies, procedures, or Websites, and all revisions to such that have been implemented should be verified and documented. Confirmation that the institution’s research community at large has received notification of any corresponding updates should be ascertained and placed in the file as appropriate.

### 3105.7 Conclusion

Does the size of the institution impact the audit process? Should different tactics be followed for smaller institutions? Whether the institution is small, mid-sized, or large or public or private, the philosophy behind an audit is still the same — to assess and address any systemic compliance and accounting controls and problems that may exist. Every institution should plan for an audit accordingly — and in the same manner — by assuring that it has adequate internal controls in place and knowledgeable personnel on staff to facilitate the audit.

However, differences in audits do exist from institution to institution. First and foremost the outcome of an audit is heavily dependent on the institution’s preparedness. The control environment established within institutions varies greatly and therefore is a determining factor in the outcome. In addition the audit process and outcome can differ from institution to institution as well as from audit to audit with-
in an institution, depending upon the experience level of the auditor. An institution can proactively evaluate and gauge its preparedness and readiness for an audit by conducting a self-assessment of its internal controls. By establishing, implementing, and periodically testing internal controls for compliance, reliability, and integrity, an institution begins — and continues — the preparation for future interactions with auditors. (For a full discussion of self-assessment activities, see Chapter 3900.)
Supplementary Material

This section includes expanded coverage of topics relating to interactions with auditors — external and internal. These materials are culled from a variety of authoritative sources.

Importance of Offices of Inspector General Audit Reports and Priorities

AIS editors

The concerns about specific compliance requirements that are addressed in Circular A-133 audits often are reinforced by audit work performed by federal Offices of Inspector General (OIG) or by public accounting firms under contract to them (see Figure 3120.1). Like auditors performing the Circular A-133 audit, auditors from the OIGs or independent auditors performing audits under contract to the OIG must follow the Government Auditing Standards (the Yellow Book, available at www.gao.gov/govaud/ybk01.htm).

These reviews are undertaken despite the fact that the covered institutions have undergone the annual Circular A-133 audits. Federal auditors generally point to their broad statutory authority under the Inspector General Act. This is restated in §__.215 of Circular A-133, “Relationship to Other Audit Requirements.” Taken together, those policies permit supplementary audits, as long as they are planned and performed “in such a way to build upon work performed by other auditors.” As the National Science Foundation OIG explains in its semiannual reports, “The findings contained in A-133 reports help to identify potential risks to ... awards and are useful ... in planning site visits, post-award monitoring, and future audits.”

OIG audits are typically post-award and take place after the conclusion of the contract or grant or other assistance agreement and before the end of the required record retention period. In general, the subjects of post-award audits are the costs incurred, and the audits will be conducted either in person or via a desk audit. Documentation of expenses is closely looked at during these audits.

The closeout process is the perfect preparation for a post-award audit. This process is the final review of items such as incurred costs, including effort, cost transfers, and direct charging of clerical and administrative costs before submission of the final financial report. Unallowable costs not previously detected should be removed at this time, and documentation not previously provided should be obtained for costs.

The Targets of OIG Audits

The OIG annual audit plans or work plans provide insight into the areas that the OIG will target for audit in the fiscal year. These plans are issued at the beginning of each fiscal year, usually during October. The audit areas listed in the plan serve as a heads-up for institutions as to what the OIG is looking for.
Audit Reports and Work Plans

As audits are completed, the OIGs generate “audit reports.” Many audit reports are posted on individual agency OIG Web sites (see box below). Reviewing audit reports can be instructive. They can provide awareness into potential areas of federal agencywide concern and serve as a catalyst for conducting an internal assessment of the strengths and weaknesses of an institution’s policies and practices and the extent to which an institution’s policies and practices are being followed. (For a full discussion of self-assessment, see ¶3905.) The Department of Education, NASA, the Energy Department, and the Defense Department, among others, have also been somewhat active in this arena.

The HHS OIG has focused on compliance with cost principles, including cost transfers and cost sharing, how subrecipients manage their costs, administrative and clerical salaries, and salary and effort reporting. In FY 2008 it added financial conflicts of interest to its audit list.

The NSF OIG in its annual audit plan usually lists as a target area review of the adequacy of grantee systems to safeguard and properly account for NSF funds and comply with federal and NSF award requirements. The NSF OIG also initiated a review of labor effort at universities that receive the largest amounts of NSF funding because of the findings of the HHS OIG audits on the issue at major universities.

Although not the only federal funding agencies to conduct audits of awardees, because they are major federal funding agencies, examining the annual audit plans of the HHS and NSF OIGs can be highly instructive.

**HHS and NSF OIGs’ Activity**

- HHS OIG work plans and semiannual reports
  [http://oig.hhs.gov/publications.html](http://oig.hhs.gov/publications.html)
- HHS OIG audit reports for NIH
  [http://oig.hhs.gov/oas/oas/nih.html](http://oig.hhs.gov/oas/oas/nih.html)
- NSF OIG work plans and semiannual reports
- NSF OIG audit reports
OIG Audit vs. A-133 Audit

One difference between the OIG audits and the A-133 audits is that the OIG auditor will always review the grantee’s policies and procedures on an audit issue. This is done to determine whether the policies and procedures conform to federal regulations and grant requirements, including the circulars and the grant document, and whether the grantee actually follows its policies and procedures. Many audit findings cite the grantee for unclear policies and procedures or for failing to follow its own policies and procedures.

The OIGs also summarize the results of high-profile audits in a semiannual report to Congress. Under the Inspector General Act of 1978, as amended, each federal OIG is required to issue a semiannual report to Congress providing certain standardized data as well as a narrative summary of the major issues and vulnerabilities experienced in agency programs, functions, and activities. (Agency inspector generals are required to report semiannually on the activities of the office during the 6-month periods ending March 31 and September 30. These reports are “dated” March and September of each year, but they are often published later than the date they carry.) Particularly for those federal agencies that provide significant amounts of federal assistance to higher education institutions or award research and other contracts to such institutions, the semiannual reports of the inspectors general can provide numerous indicators of the areas that are receiving greater scrutiny or that are causing compliance difficulties.

Another resource for identifying OIG audit targets is the audit of the agency grants management programs conducted by the OIG or the Government Accountability Office. Whatever weaknesses are exposed in the audit of the agency is likely to surface in an audit of the grantee as well. For example, if an agency is criticized for not ensuring timely delivery of reports, it is likely that during an audit of the institution, the auditor will review the filing dates of the required reports.

Figure 3120.1-1: Selected Federal Agency Offices of Inspector General Homepages

At each OIG homepage, you can find links to audit reports, guidance, testimony, and work plans.

<table>
<thead>
<tr>
<th>Agency</th>
<th>Homepage</th>
</tr>
</thead>
<tbody>
<tr>
<td>National Science Foundation</td>
<td><a href="http://www.oig.nsf.gov">www.oig.nsf.gov</a></td>
</tr>
<tr>
<td>Health &amp; Human Services/NIH</td>
<td><a href="http://oig.hhs.gov">http://oig.hhs.gov</a></td>
</tr>
<tr>
<td>Agriculture</td>
<td><a href="http://www.usda.gov/oig">www.usda.gov/oig</a></td>
</tr>
<tr>
<td>Commerce</td>
<td><a href="http://www.oig.doc.gov">www.oig.doc.gov</a></td>
</tr>
<tr>
<td>Defense</td>
<td><a href="http://www.dodig.mil">www.dodig.mil</a></td>
</tr>
<tr>
<td>Education</td>
<td><a href="http://www.ed.gov/about/offices/list/oig">www.ed.gov/about/offices/list/oig</a></td>
</tr>
<tr>
<td>Energy</td>
<td><a href="http://www.ig.energy.gov">www.ig.energy.gov</a></td>
</tr>
<tr>
<td>EPA</td>
<td><a href="http://www.epa.gov/oigearth">www.epa.gov/oigearth</a></td>
</tr>
<tr>
<td>Housing &amp; Urban Development</td>
<td><a href="http://www.hud.gov/offices/oig">www.hud.gov/offices/oig</a></td>
</tr>
<tr>
<td>Interior</td>
<td><a href="http://www.doioig.gov">www.doioig.gov</a></td>
</tr>
<tr>
<td>Justice</td>
<td><a href="http://www.usdoj.gov/oig">www.usdoj.gov/oig</a></td>
</tr>
<tr>
<td>Labor</td>
<td><a href="http://www.oig.dol.gov">www.oig.dol.gov</a></td>
</tr>
<tr>
<td>State</td>
<td>oig.state.gov</td>
</tr>
<tr>
<td>Transportation</td>
<td><a href="http://www.oig.dot.gov">www.oig.dot.gov</a></td>
</tr>
<tr>
<td>NASA</td>
<td><a href="http://www.hq.nasa.gov/office/oig">www.hq.nasa.gov/office/oig</a></td>
</tr>
<tr>
<td>National Endowment for the Arts</td>
<td><a href="http://www.nea.gov/about/OIG">www.nea.gov/about/OIG</a></td>
</tr>
<tr>
<td>National Endowment for the Humanities</td>
<td><a href="http://www.neh.gov/about/OIG">www.neh.gov/about/OIG</a></td>
</tr>
</tbody>
</table>

Note: All OIGs are linked to a single Internal portal at www.ignet.gov/igs/homepage1.html.
Trend in NIH Cost Recovery under OIG Audits


According to the GAO report, OIG completed an average of three audits per year of NIH grants at universities during this period. OIG conducts its audits at its discretion subject to the availability of its audit resources. (Again, because of the risk of improper payments under the Medicare and Medicaid programs, the majority of OIG funding is used for audit work related to these federal programs.) The OIG audits issued from FYs 2003–2006 that GAO reviewed generally focused on particular grants and the university’s compliance with rules and regulations that pertained to them, rather than providing a broad examination of the university’s internal controls and compliance with laws and regulations pertaining to federal funding. (This is more properly the focus of A-133 single audits, see ¶1305.)

However, focusing on problems in claiming costs for a specific grant can uncover systemic internal control problems that could affect other federal grants, according to GAO. For example, an OIG audit found that a university overcharged $37,780 in direct and indirect costs associated with an NIH grant, which, in turn, revealed a systemic weakness in the university’s procedures intended to ensure proper accounting for the time and activity of individuals working on its grants. Other issues that were identified as a result of OIG and single audits included unallowable costs claimed, incorrect accounting for indirect costs, allocation of costs to the wrong grant, and insufficient monitoring of subrecipients.

GAO found that NIH did not always require universities to reimburse the full amount of costs questioned. Of the seven OIG audit files reviewed by GAO for the period FYs 2003–2006 with monetary findings, GAO found that NIH recovered the full amount of costs questioned in two cases and recovered less than the full amount in five cases. In total, OIG questioned about 12 percent of the funds that it audited. Of the $1.5 million in funds questioned, NIH recovered $864,860. This represents about 56 percent of the OIG’s questioned costs that NIH determined were insufficiently justified (see Figure 3120.1-2).
Awardee Cost Justifications. NIH recovered less than the full questioned costs in the OIG audits, according to GAO, because in reviewing the audits, NIH determined that the costs in five cases were sufficiently justified by information provided by the grantee and input from NIH staff responsible for overseeing scientific progress associated with the grant. NIH staff sometimes accepted documents that OIG did not accept as sufficient evidence to support claimed costs. For example, for one university OIG could not determine who requested certain services and whether the costs were allocable to the grant. Although the university had presented invoices as support, the corresponding purchase requisitions, which contained the necessary information to address OIG’s inquiry, had not been retained. Subsequently, NIH accepted the invoices as support and determined that approximately $119,000 of questioned costs were acceptable and did not need to be reimbursed.

In other cases, universities provided additional documentation to justify the costs that were claimed. For example, in one case, OIG found that costs associated with time and effort spent by summer and part-time labor were unsupported and other costs were incorrectly charged. The university provided alternate documentation for these costs, which OIG did not accept. However, after a review of the facts and internal discussions with NIH staff responsible for overseeing the grant’s scientific progress,
NIH accepted the documentation in conjunction with additional explanatory information from the university and ultimately determined that the approximately $193,000 in costs claimed were acceptable.

*Audit Determination Letter.* NIH officials told GAO that if a university disagrees with its determination of the appropriate audit resolution, the agency issues an audit determination letter. The audit determination letter specifies the amounts to be returned, including accrued interest, and any corrective actions to be taken. Universities have the right to appeal an audit determination letter. NIH told GAO that an audit determination letter is rarely needed because universities and NIH almost always agree on the resolution of audit findings.
What Auditors Look For

Since the mid-1970s, federal grant requirements have imposed a responsibility upon academic institutions to undergo audits on an organizationwide basis and review a sampling of grant transactions. This audit is customarily conducted by an auditor engaged by the institution — usually a certified public accounting firm. In some cases, this external audit is conducted by a governmental organization, such as the state auditor or auditor general. These audits are sometimes viewed as the federal government’s “first line of defense” in determining whether financial information is accurate, internal controls (policies and procedures) are in place and working, and compliance with laws and regulations affecting claims for federal funds is achieved. OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations, prescribes this audit requirement for federal grantees. (Copies of Circular A-133, as well as other OMB circulars, can be found at www.whitehouse.gov/omb/circulars.)

Audit Standards

Understanding the standards and resources an auditor must and will rely upon during the conduct of an audit should enable research administrators to ensure more accurate, efficient, and compliant audits. A critical ingredient to “audit readiness” is an awareness of the types of requirements that will be tested as part of the examination. (For more on preparing for an audit, see ¶3105.3 and ¶1305.14.)

In performing an A-133 audit, auditors must follow the Government Auditing Standards (GAGAS), or “Yellow Book,” which is issued by the federal Government Accountability Office (GAO). (Copies of the Yellow Book are available at www.gao.gov/govaud/ybk01.htm.) GAGAS addresses two kinds of audits — financial and performance. An audit performed under OMB Circular A-133 is a “financial audit” within the meaning of GAGAS.

For financial audits, the Yellow Book incorporates standards established by the American Institute of Certified Public Accountants (AICPA), specifically the three fieldwork and the four reporting standards of the Generally Accepted Auditing Standards (GAAS) and the implementing guidance referred to as Statement of Auditing Standards (SAS) (see www.aicpa.org). For financial audits, GAGAS imposes five additional requirements on auditors, and A-133 adds more requirements with regard to internal control and compliance with laws, regulations, and terms and conditions of federal awards (at §100.500 of Circular A-133).

The feature that distinguishes an A-133 audit from an audit conducted under GAAS or GAGAS is the identification of “major” federal programs. The federal government, as a matter of policy, has determined that certain programs, while not necessarily material to the overall financial statements of an institution, are nevertheless important to awarding agencies.
Circular A-133 reflects the notion that larger, more risky, federal programs should be subjected to mandatory procedures. Determination and auditing of major programs is one of the major problems found in A-133 audits.

**Major Federal Programs**

The component of a Circular A-133 audit that distinguishes it from other GAGAS audits is the determination of major federal programs. Essentially, a major federal program is a program that, based upon a variety of factors, is deemed to be subject to an inherently high risk of material noncompliance. As part of the risk assessment that an auditor undertakes in order to determine the extent of substantive testing that must be accomplished, the auditor uses the risk-based strategy established in §__.520 and §__.525 of Circular A-133.

If an auditor designates a program high-risk, the next audit inquiry is whether the internal controls over the federal program are sufficiently well designed and operational to conclude that the system could prevent or detect material noncompliance. If the internal control system is well designed and placed in operation, the auditor can sample fewer transactions to arrive at the level of evidence needed to make a compliance determination. In the converse, if the internal control system is poorly designed or haphazardly followed, then the auditor would have to review a significantly greater number of transactions to determine whether the organization has complied in all material respects with the applicable laws and regulations.

**Risk-Based Strategy.** The risk-based strategy prescribed in §__.520 and §__.525 of Circular A-133 represents a significant departure from previous federal thinking on the approach to auditing federal programs. Unlike prior approaches that focused exclusively on the size of the award, Circular A-133 uses dollar size as one factor — but not the exclusive factor — in determining major programs. It instructs the auditor to differentiate programs according to whether they are large (Type A) programs or smaller (Type B) programs. The amount of federal awards expended serves as the dividing line between Type A and Type B programs.

Once the auditor has identified Type A and Type B programs, he or she assesses the program’s risk of material noncompliance in accordance with the factors in §__.525 of Circular A-133. None of the factors listed in §__.525 is determinative by itself; the auditor considers all factors and documents the risk assessment process in the working

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**Reminder**

The American Institute of Certified Public Accountants has posted a number of illustrative auditor’s reports to its Web site. Auditor’s reports under government auditing standards are taken from Appendix A of the recently released 2007 AICPA audit guide, Government Audit Standards and Circular A-133 Audits. Also posted to the site are examples of the report on compliance with requirements applicable to each major program and on internal control over compliance issued under OMB Circular A–133 in various circumstances. Link: [http://gaqc.aicpa.org/Resources/Illustrative+Auditors+Reports](http://gaqc.aicpa.org/Resources/Illustrative+Auditors+Reports).
papers. Circular A-133 states that if the risk assessment is accomplished in the manner prescribed in the circular, the auditor’s judgment with respect to which programs should be deemed major “shall be presumed correct.” However, one additional factor that will influence risk assessment in the future is if a federal agency issues instructions to consider certain types of risk. The circular states that the auditor “shall consider such guidance” in Circular A-133 audits.

The risk assessment will lead to four categories of federal programs:

- High-risk Type A  
- High-risk Type B  
- Low-risk Type A  
- Low-risk Type B

Circular A-133 requires the audit of enough programs to cover at least 25 percent or 50 percent of the federal fund expenditures, depending upon whether the institution is classified as low-risk (25 percent) or high-risk (50 percent). In addition to the risk assessment, the auditor may consider other factors in deciding which programs to include in the audit. Section ___520 sets out certain factors to consider as risk indicators:

1. Current and prior audit experience
2. Oversight by federal agencies and pass-through entities
3. The inherent risk of the federal program

Financial Audit

Under GAGAS, financial audits encompass financial statement audits and other audits, including reports on internal control, compliance with laws and regulations, and provisions of contracts and grant agreements as they relate to financial transactions, systems, and processes.

Financial Statement Audit. The primary purpose of a financial statement audit, according to GAGAS, “is to provide reasonable assurance through an opinion (or disclaim an opinion) about whether an entity’s financial statements are presented fairly in all material respects in conformity with generally accepted accounting principles (GAAP) . . . .”

Circular A-133’s discussion of the scope of the financial statement audit mirrors the objectives of a GAGAS financial statement audit and adds a requirement (see §___500(b)). The auditor is instructed to determine whether the

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<table>
<thead>
<tr>
<th>The 14 Compliance Requirements</th>
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<tbody>
<tr>
<td>A. Activities Allowed or Unallowed</td>
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<tr>
<td>B. Allowable Costs/Cost Principles</td>
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<tr>
<td>C. Cash Management</td>
</tr>
<tr>
<td>D. Davis Bacon Act</td>
</tr>
<tr>
<td>E. Eligibility</td>
</tr>
<tr>
<td>F. Equipment and Real Property Management</td>
</tr>
<tr>
<td>G. Matching, Level of Effort, Earmarking</td>
</tr>
</tbody>
</table>
◆ financial statements of a college or university (or other entity covered by the circular) are presented fairly in all material respects in accordance with generally accepted accounting principles (GAAP); and

◆ Schedule of Expenditures for Federal Awards is presented fairly in all material respects in relation to the financial statements of the organization taken as a whole.

Auditing Compliance. In addition to the requirements of GAGAS, Circular A-133 requires the auditor “to determine whether the auditee has complied with laws, regulations, and the provisions of contracts or grant agreements that may have a direct and material effect on each of its major programs.”

Award documents impose numerous terms and conditions on colleges and universities. Many of the requirements imposed in this context will not be audited as part of the Circular A-133 examination. Instead, the auditor, with the blessing of A-133, will concentrate — exclusively or predominantly — on the 14 compliance requirements listed in the OMB A-133 Compliance Supplement (see ¶1305.13 for a discussion of these 14 requirements).

The Compliance Supplement essentially is an audit guide fashioned to save auditors significant amounts of time and effort in researching rules and requirements associated with federal programs. If the Compliance Supplement did not exist, individual auditors would have to determine which laws and regulations could have a direct and material effect on individual federal programs. By formulating the Compliance Supplement, OMB — and the federal agencies that provide information to OMB — are ensuring that the independent auditor will address those matters that are of greatest federal concern. (Copies of the OMB A-133 Compliance Supplement, which is issued annually usually in the Spring, can be found at www.whitehouse.gov/omb/circulars.)

Part 2 of the Compliance Supplement sets out a matrix of the 14 compliance requirements and the Catalog of Federal Domestic Assistance (CFDA) numbers of the programs to which they apply. The auditor is instructed to identify the CFDA number for the program and then determine from the matrix whether a particular requirement applies. Section ____.500 of the circular, which the Compliance Supplement reinforces, states the following:

Section ____.500 of Circular A-133

For those Federal programs not covered in the compliance supplement, the auditor should use the types of compliance requirements contained in the compliance supplement as guidance for identifying the types of compliance requirements to test, and determine the requirements governing the Federal program by reviewing the provisions of contracts and grant agreements and the laws and regulations referred to in such contracts and grant agreements.

In other words, if the program is not covered specifically in the Compliance Supplement, the auditor must study the laws and regulations and the terms and conditions of award documents that are relevant to the 14 compliance requirements that have been arrayed as part of the matrix. Under these circumstances, the auditor will design an
Supplementary Material

Auditing Internal Controls

Internal controls are those policies, procedures, and processes that provide reasonable assurance that an organization is operating efficiently and effectively, has reliable financial reporting, and is compliant with applicable laws and regulations. Examples of internal controls include the following:

- Written policies and procedures
- Segregation of duties
- Approvals and authorizations
- Monitoring and reporting
- Verification
- Physical restrictions
- Documentation

For purposes of the A-133 audit, there are two levels to an auditor’s internal control work. First, the auditor will determine whether internal controls at the organizational and financial statement level are designed properly and in place. Then, the auditor will determine whether internal controls over compliance are implemented with regard to federal programs. In other words, there is an audit of internal control over financial reporting and an audit of internal control over compliance related to major federal programs.

Reminder

The compliance requirements identified by the auditor, in most cases, arise from OMB Circular A-110 and the cost principles for educational institutions, OMB Circular A-21. Institutions may play an important but subtle role at this juncture of the audit by (1) making the CFDA numbers available so auditors can use the Compliance Supplement to the maximum extent possible, and (2) ensuring that auditors who will perform the field work understand the nature of the supplement’s cross-cutting requirements. Because, in some cases, independent auditors will have to perform additional research, the institution also may help identify the requirements of programs not included in the Compliance Supplement that should be subjected to specific kinds of compliance testing. Nothing precludes the institution from helping the auditor formulate the audit program in these circumstances.
Circular A-133, §___.105 defines internal control as

... a process, effected by an entity’s management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories:

(1) Effectiveness and efficiency of operations;
(2) Reliability of financial reporting; and
(3) Compliance with applicable laws and regulations.

For purposes of the A-133 audit, there are two levels to an auditor’s internal control work. First, the auditor determines whether internal controls at the organizational and financial statement level have been designed properly and placed in operation. Then, the auditor determines whether the internal controls over compliance have been established and implemented with regard to federal programs. In other words, there is an audit of internal control over financial reporting and an audit of internal control over compliance related to major federal programs.

For federal government agencies and various pass-through organizations, internal controls over federal programs are of great concern. Those internal controls largely represent the institution’s administration of sponsored programs — those policies and procedures and checks and balances that are in place to comply with the terms and conditions of specific federal awards and related federal laws and regulations.

Circular A-133 defines internal controls for compliance as

... a process — effected by an entity’s management and other personnel — designed to provide reasonable assurance regarding the achievement of the following objectives for Federal programs:

(1) Transactions are properly recorded and accounted for to:
   (i) Permit the preparation of reliable financial statements and Federal reports;
   (ii) Maintain accountability over assets; and
   (iii) Demonstrate compliance with laws, regulations, and other compliance requirements;

(2) Transactions are executed in compliance with:
   (i) Laws, regulations, and the provisions of contracts or grant agreements that could have a direct and material effect on a Federal program; and
   (ii) Any other laws and regulations that are identified in the compliance supplements; and

(3) Funds, property, and other assets are safeguarded against loss from unauthorized use or disposition.

Section ___.500(c) of Circular A-133 instructs the auditor to plan the audit so that it achieves a “low assessed level of control risk” for major programs, as set out in the
**OMB A-133 Compliance Supplement.** Translated, this means that the auditor must determine whether both the institution’s internal control system for financial reporting and for compliance reduce to a low level the likelihood of a material misstatement related to the financial statements or to one of the assertions covered by the 14 compliance requirements of the Compliance Supplement. (For a discussion of the importance of internal control testing in the compliance arena, see Figure 3120.2-1, page 3120:15.)

If, in the conduct of the internal control study and evaluation, the auditor concludes that the internal control system is so poorly designed that it could not prevent or detect noncompliance, he or she is not expected to conduct testing to see whether the control system works as intended. Such a review, it is assumed, would have no value. However, the auditor would be required to assess the severity of the deficiency and issue a finding depending upon its likelihood of impacting the financial reporting (see A-133, §___.500(c)(3)).

**A-133 Compliance Supplement and Internal Controls.** Internal controls have become an auditing “hot topic” recently, and it is recommended that colleges and universities assess the strengths and vulnerabilities of their systems (for examples of internal control deficiencies, see Figure 3120.2-2, page 3120.16). Part 6 of the Compliance

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**More Findings in the Future?**

Audits of and reports on internal control under GAGAS and A-133 on or after December 15, 2007, have the potential to produce more findings than in the past. This is because standard-setting bodies have revised their standards, and a new set of definitions apply to communicating internal control deficiencies in financial audits. These new definitions may lower the threshold for what were previously termed “reportable conditions,” which may result in an increase in the number of findings the auditor must include in the audit report and in communications to the management, audit committees, and “those charged with governance.”

**Revised Standards:** To move towards reasonable conformity among the different accounting standards, GAO adopted and incorporated the AICPA’s Statement of Auditing Standards (SAS) 112 terms and their definitions into the January 2007 revision of GAGAS for purposes of financial audits (GAGAS 5.11). OMB issued a notice revising Circular A-133 by adopting the SAS 112/GAGAS terms and definitions (72 Fed. Reg. 35080, June 26, 2007). To further conform Circular A-133 to the new terminology, OMB worked with the AICPA, and the AICPA (72 Fed. Reg. 35080, June 26, 2007) released Auditing Interpretation No. 1 to define these terms with regard to A-133 compliance audits.

SAS 112 is available at www.aicpa.org/download/members/div/auditstd/AU-00325.PDF. The AICPA interpretation can be found at www.aicpa.org/download/auditstd/interpretations/Interpretation_No_1_9325.pdf.

The AICPA has issued guidance for auditors to use in evaluating deficiencies in internal controls over compliance in a single audit. The October 2007 guidance is published as GAQC Alert #62 in Government Auditing Standards and Circular A-133 Audits (GAS-A133 Alert), available from AICPA, and also is posted in full on the AICPA Web site at http://gaqc.aicpa.org/Resources/Archived+GAQC+Update+Newsletters/GAQC+Alert+No.+62.htm.
Supplement deals with internal controls. The purpose of this part is to help the auditor and the auditee identify internal control features, which, if in place and working, may be an indicator of internal control over federal programs. The AICPA has issued guidance for auditors to use in evaluating deficiencies in internal controls over compliance in a single audit. (The October 2007 guidance is published as GAQC Alert #62 in Government Auditing Standards and Circular A-133 Audits (GAS-A133 Alert), available from AICPA, and also is posted in full on the AICPA Web site at http://gaqc.aicpa.org/Resources/Archived+GAQC+Update+Newsletters/GAQC+Alert+No.+62.htm.)

Part 6 of the Compliance Supplement lists five components of internal control that, if present, should reasonably assure compliance:

1. **Control Environment**: The foundation for all other internal control components by providing discipline and structure
2. **Risk Assessment**: The information from which will determine how risks should be managed
3. **Control Activities**: The policies and procedures that put into effect management’s policies
4. **Information and Communication**: The identification, capture, and exchange of information in a form and time frame that enable people to carry out their responsibilities
5. **Monitoring**: Assesses the quality of internal control performance on an ongoing basis

For each of the Compliance Supplement’s compliance requirements, except for N. Special Tests and Provisions, the supplement suggests actions that would satisfy these internal control components (see for example Figure 3120.2-3, page 3120:17). In its introduction to the part, however, OMB stipulates that these internal control features are *not* requirements, and an institution may address internal controls differently. Despite this disclaimer, independent auditors tend to view the features identified in Part 6 as standard practices expected for all types of institutions (see Figure 3120.2-4, page 3120:19).
Figure 3120.2-1: National Single Audit Sampling Project

There has been a belief in the federal audit community and among the federal Inspector Generals in particular that the quality of the A-133 audits has not been particularly good. As a result, the National Single Audit Sampling Project was conducted under the auspices of the President’s Council on Integrity and Efficiency whose goals were to determine the quality of single audits, establish a statistically based measure of audit quality and recommend changes in single (A-133) audit requirements, standards, and procedures to improve the quality of the single audit. The results of the project were released in summer 2007 (available at www.ignet.gov/pande/audit/NatSamProjRptFINAL2.pdf).

In the National Single Audit Sampling Project, a significant percentage of audits were found to have inadequately documented compliance testing. The project suggests just how important internal controls over federal programs are to the government. The project did not review internal control over financial reporting, only internal control over compliance.

In reviewing 208 audits, the statistical sampling showed that a significant percentage were of limited reliability because of significant deficiencies or material reporting errors. Most prevalent among the deficiencies were lack of documentation of the understanding of internal controls over compliance requirements, not documenting the testing of internal controls in some compliance requirements, and no documentation of compliance testing.

The project results contained three recommendations: (1) revise and improve single audit standards, criteria, and guidance; (2) establish minimum requirements for training on performing single audits; and (3) review and enhance processes to address unacceptable single audits.

Changes Ahead. Although it is too soon to know the full extent of the fallout from the President’s Council on Integrity and Efficiency’s National Single Audit Sampling Project’s final report, the Office of Management and Budget (OMB) has indicated that it is preparing to implement the report’s recommendation that affect the agency. OMB is preparing draft amendments to Circular A-133 to be completed by June 2008. The amendments will likely

◆ provide additional guidance to auditors on how to identify major programs;
◆ clarify when audit findings must be reported;
◆ emphasize that auditors must provide more specific documentation of audit activities and findings for major programs; and
◆ clarify the requirements for sample selection.
**Figure 3120.2-2: GAGAS Examples of Deficiencies in Internal Control**

a. Insufficient control consciousness within the organization, for example the tone at the top and the control environment. Control deficiencies in other components of internal control could lead the auditor to conclude that weaknesses exist in the control environment.

b. Ineffective oversight by those charged with governance of the entity’s financial reporting, performance reporting, or internal control, or an ineffective overall governance structure.

c. Control systems that did not prevent or detect material misstatements so that it was later necessary to restate previously issued financial statements or operational results. Control systems that did not prevent or detect material misstatements in performance or operational results so that it was later necessary to make significant corrections to those results.

d. Control systems that did not prevent or detect material misstatements identified by the auditor. This includes misstatements involving estimation and judgment for which the auditor identifies potential material adjustments and corrections of the recorded amounts.

e. An ineffective internal audit function or risk assessment function at an entity for which such functions are important to the monitoring or risk assessment component of internal control, such as for a very large or highly complex entity.

f. Identification of fraud of any magnitude on the part of senior management.

g. Failure by management or those charged with governance to assess the effect of a significant deficiency previously communicated to them and either to correct it or to conclude that it will not be corrected.

h. Inadequate controls for the safeguarding of assets.

i. Evidence of intentional override of internal control by those in authority to the detriment of the overall objectives of the system.

j. Deficiencies in the design or operation of internal control that could result in violations of laws, regulations, provisions of contracts or grant agreements, fraud, or abuse having a direct and material effect on the financial statements or the audit objective.

k. Inadequate design of information systems (IS) general and application controls that prevent the information system from providing complete and accurate information consistent with financial or performance reporting objectives and other current needs.

l. Failure of an application control caused by a deficiency in the design or operation of an IS general control.

m. Employees or management who lack the qualifications and training to fulfill their assigned functions.

*Source: Government Accounting Standards, Appendix I, Supplemental Guidance, A.04.*
Figure 3120.2-3: Suggested Internal Control Procedures for A. Activities Allowed or Unallowed and B. Allowable Costs/Cost Principles

Control Objectives

To provide reasonable assurance that Federal awards are expended only for allowable activities and that the costs of goods and services charged to Federal awards are allowable and in accordance with the applicable cost principles.

Control Environment

- Management sets reasonable budgets for Federal and non-Federal programs so that no incentive exists to miscode expenditures.
- Management enforces appropriate penalties for misappropriation or misuse of funds.
- Organization-wide cognizance of need for separate identification of allowable Federal costs.
- Management provides personnel approving and pre-auditing expenditures with a list of allowable and unallowable expenditures.

Risk Assessment

- Process for assessing risks resulting from changes to cost accounting systems.
- Key manager has a sufficient understanding of staff, processes, and controls to identify where unallowable activities or costs could be charged to a Federal program and not be detected.

Control Activities

- Accountability provided for charges and costs between Federal and non-Federal activities.
- Process in place for timely updating of procedures for changes in activities allowed and cost principles.
- Computations checked for accuracy.
- Supporting documentation compared to list of allowable and unallowable expenditures.
- Adjustments to unallowable costs made where appropriate and follow-up action taken to determine the cause.
- Adequate segregation of duties in review and authorization of costs.
- Accountability for authorization is fixed in an individual who is knowledgeable of the requirements for determining activities allowed and allowable costs.

Information and Communication

- Reports, such as a comparison of budget to actual, provided to appropriate management for review on a timely basis.
- Establishment of internal and external communication channels on activities and costs allowed.
- Training programs, both formal and informal, provide knowledge and skills necessary to determine activities and costs allowed.
- Interaction between management and staff regarding questionable costs.

continued
Grant agreements (including referenced program laws, regulations, handbooks, etc.) and cost principles circulars available to staff responsible for determining activities allowed and allowable costs under Federal awards.

**Monitoring**
- Management reviews supporting documentation of allowable cost information.
- Flow of information from Federal agency to appropriate management personnel.
- Comparisons made with budget and expectations of allowable costs.
- Analytic reviews (e.g., comparison of budget to actual or prior year to current year) and audits performed.

*Source*: OMB Circular A-133 Compliance Supplement
Figure 3120.2-4: Examples of the Five Components of Internal Control

(1) Control Environment sets the tone of an organization influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure.

- Sense of conducting operations ethically, as evidenced by a code of conduct or other verbal or written directive.
- If there is a governing Board, the Board has established an Audit Committee or equivalent that is responsible for engaging the auditor, receiving all reports and communications from the auditor, and ensuring that audit findings and recommendations are adequately addressed.
- Management’s positive responsiveness to prior questioned costs and control recommendation.
- Management’s respect for and adherence to program compliance requirements.
- Key managers’ responsibilities clearly defined.
- Key managers have adequate knowledge and experience to discharge their responsibilities.
- Staff knowledgeable about compliance requirements and being given responsibility to communicate all instances of noncompliance to management.
- Management’s commitment to competence ensures that staff receive adequate training to perform their duties.
- Management’s support of adequate information and reporting system.

(2) Risk Assessment is the entity’s identification and analysis of risks relevant to achievement of its objectives, forming a basis for determining how the risks should be managed.

- Program managers and staff understand and have identified key compliance objectives.
- Organizational structure provides identification of risks of noncompliance:
  — Key managers have been given responsibility to identify and communicate changes.
  — Employees who require close supervision (e.g., are inexperienced) are identified.
  — Management has identified and assessed complex operations, programs, or projects.
  — Management is aware of results of monitoring, audits, and reviews and considers related risk of noncompliance.
- Process established to implement changes in program objectives and procedures.

(3) Control Activities are the policies and procedures that help ensure that management’s directives are carried out.

- Operating policies and procedures clearly written and communicated.
- Procedures in place to implement changes in laws, regulations, guidance, and funding agreements affecting Federal awards.
- Management prohibition against intervention or overriding established controls.
- Adequate segregation of duties provided between performance, review, and recordkeeping of a task.
- Computer and program controls should include:
  — Data entry controls, e.g., edit checks.

continued
Figure 3120.2-4 (continued)

— Exception reporting.
— Access controls.
— Reviews of input and output data.
— Computer general controls and security controls.

• Supervision of employees commensurate with their level of competence.
• Personnel with adequate knowledge and experience to discharge responsibilities.
• Equipment, inventories, cash, and other assets secured physically and periodically counted and compared to recorded amounts.
• If there is a governing Board, the Board conducts regular meetings where financial information is reviewed and the results of program activities and accomplishments are discussed. Written documentation is maintained of the matters addressed at such meetings.

(4) Information and Communication are the identification, capture, and exchange of information in a form and time frame that enable people to carry out their responsibilities.

• Accounting system provides for separate identification of Federal and non-Federal transactions and allocation of transactions applicable to both.
• Adequate source documentation exists to support amounts and items reported.
• Recordkeeping system is established to ensure that accounting records and documentation are retained for the time period required by applicable requirements, such as the A-102 Common Rule (§____.42), OMB Circular A-110 (§____.53), and the provisions of laws, regulations, contracts or grant agreements applicable to the program.
• Reports provided timely to managers for review and appropriate action.
• Accurate information is accessible to those who need it.
• Reconciliations and reviews ensure accuracy of reports.
• Established internal and external communication channels.
   — Staff meetings.
   — Bulletin boards.
   — Memos, circulation files, e-mail.
   — Surveys, suggestion box.
• Employees’ duties and control responsibilities effectively communicated.
• Channels of communication for people to report suspected improprieties established.
• Actions taken as a result of communications received.
• Established channels of communication between the pass-through entity and subrecipients.

(5) Monitoring is a process that assesses the quality of internal control performance over time.

• Ongoing monitoring built-in through independent reconciliations, staff meeting feedback, rotating staff, supervisory review, and management review of reports.

continued
**Figure 3120.2-4 (continued)**

- Periodic site visits performed at decentralized locations (including subrecipients) and checks performed to determine whether procedures are being followed as intended.
- Follow up on irregularities and deficiencies to determine the cause.
- Internal quality control reviews performed.
- Management meets with program monitors, auditors, and reviewers to evaluate the condition of the program and controls.
- Internal audit routinely tests for compliance with Federal requirements.
- If there is a governing Board, the Board reviews the results of all monitoring or audit reports and periodically assesses the adequacy of corrective action.

*Source: OMB Circular A-133 Compliance Supplement, Part 6*
\section{What Happens During a ‘Site Review’?}

AIS editors

Site visits are often used as a tool for monitoring compliance, sometimes on the part of federal agencies, other times used by recipients to monitor subrecipients. After initial discussions with institutional representatives, NIH provides each institution with guidance on the topics and expectations for each subject matter discussion. This guidance includes information to enable institutional representatives to self-select the staff members for participation in the site visit.

NIH asks for materials to be submitted in advance related to the identified subject area of the site review (e.g., copies of policies, forms, procedures, manuals, and organization charts). During the preparation period, the members of the NIH site visit team discuss their respective topic areas with the institution’s staff members and answer questions about the site visit process.

In general, the site visits are conducted over one and one-half days using a structured format. Each visit begins with a plenary session to orient participants to the structure and goals of the activity, followed by breakout sessions to discuss specific topics. During the closing session, the site visit team shares observations and findings with institutional officials.

According to NIH, as its site visit practices evolved, a half-day collaborative educational outreach seminar, presented by the NIH site visit team, was added. Topics include a compliance overview, the partnership between science and administration, administration for faculty/principal investigators (PI), research contracts, financial conflict of interest, financial management of sponsored projects, data and safety monitoring, and extramural intellectual property. The seminar is characterized as “education” rather than “training” because of the value added in understanding not only what is required, but also why it is required. This distinction is important in securing faculty buy-in and thereby developing and sustaining a culture of compliance.

\textbf{Example: Site Review of FCOI}

NIH illustrates its approach to site reviews at http://grants.nih.gov/grants/compliance/compendium_2002.htm. In the following example, although the site review team was looking for compliance with the NIH financial conflict of interest regulations, the approach taken is not unique to these requirements.

The NIH site review team prepared for the series of visits by reviewing FCOI policies and other pertinent documents provided by the participating grantee institutions prior to the site review. During the one-day review, institutional officials were engaged in discussions about the FCOI program (e.g., its organization, policies, and procedures). The team also met with faculty and investigators who had experience with the institution’s FCOI program, preferably related to an NIH grant, to determine their understanding of their reporting responsibilities and institutional requirements. The institution was asked to select the individuals who met with the NIH site review team.
At the end of the day, the site review team provided their observations, identifying areas of noncompliance and recommendations concerning implementation. If areas of noncompliance were noted, the institution was expected to formally address and resolve the issues after the site review.

Materials Reviewed
◆ The institution’s written, enforced policy concerning research investigators’ financial conflict of interest
◆ Organizational charts that show where the conflict of interest function resides
◆ The guidelines created by the institution for the Designated Official to identify financial conflict of interest
◆ A description of the enforcement mechanisms and sanctions used to implement the institutional financial conflict of interest policy
◆ Financial conflict of interest files maintained by the institution
◆ Minutes of conflict of interest meetings for the past two calendar years
◆ Determinations/findings made by the Designated Official
◆ Management plans, action plans, activities, agreements, or other documents used to manage, reduce, or eliminate conflicts
◆ Correspondence, if any, between the institution and NIH relating to the financial conflict of interest process

Institutional Representation
The institution was asked to include the following types of staff members to participate in this subject area discussion based on guidance from NIH:
◆ Designated Official
◆ Conflict of interest committee members from current committee roster
◆ Investigator who had an identified conflict of interest or who had been through the financial disclosure process

Information Discussed
◆ Operational aspects of the institutional financial conflict of interest process as well as the roles and responsibilities of the Designated Official and any financial conflict of interest committee members, if such a committee exists
◆ How research investigators and others are affected by the institutional financial conflict of interest policy
◆ How to improve the financial conflict of interest process at the institutions and between the institution and NIH
◆ How the institutions share/inform the IRB(s) of conflict of interest issues pertinent to IRB activities
◆ How institutions view the issue of institutional conflict of interest
More than a few independent auditors who audit federal grants and cooperative agreements are fond of stating, “If it’s not documented, it didn’t happen.” But like a lot of assertions that are made affecting the field of federal fund management, this one deserves a closer look. Not surprisingly, these auditors — whether they come from a governmental audit organization or a public accounting firm — are basing such statements on their judgments about the sufficiency and appropriateness of the evidence they gather to provide bases for their findings, conclusions, and opinions.

Industry and governmental auditing standards instruct them that sufficiency is a quantitative and qualitative measure of whether there is enough evidence to persuade a knowledgeable person that conclusions are reasonable. Appropriateness, on the other hand, is a measure of the quality of evidence that encompasses its relevance, validity, and reliability. The audit standards discuss the types of evidence that might be gathered, including physical, testimonial, documentary, and analytical. They also indicate that each type has its own strengths and weaknesses and that certain contrasts are useful in judging the appropriateness of the evidence. For example, among others, the stated contrasts include the following:

- Examination of original documents is generally more reliable than examination of copies.
- Evidence obtained when internal control is effective is generally more reliable than evidence obtained when internal control is weak or nonexistent.
- Evidence obtained through direct physical examination, observation, computation, and inspection is generally more reliable than evidence obtained indirectly.
- Testimonial evidence obtained from an individual who is not biased and has direct knowledge about the area is generally more reliable than testimonial evidence obtained from an individual who is biased or has indirect or partial knowledge about the area.

The use of the word “generally” is instructive. It shows that judgment must continue to be exercised about the relative strength of evidence that grantees generate and retain and that auditors review. It is not oversimplification to point out that having a lot of weak documentary evidence — or not much strong documentary evidence — can be a recipe for a protracted and possibly unpleasant grant audit resolution process involving questioned costs. But, while accurate, current, and complete grant documents are an ideal antidote to that condition, recipients and subrecipients also should be ready to introduce alternative-types of evidence, such as work product and knowledgeable staff statements, when an auditor identifies any documentary gaps.

Be Sure to Consider Records Disposal, Too

With very few exceptions required by federal statute, the standard duration for federal grant record retention is three years. According to the uniform policies crafted by the Office of Management and Budget for recipients and subrecipients (see Circular A-110, 2 CFR 215.53), the trigger that starts that three-year clock ticking is “the date of submission of the final expenditure report or, for awards that are renewed quarterly or annually, from the date of submission of the quarterly or annual financial report, as authorized by the federal awarding agency.”

Nowhere in those policies is there an explicit statement instructing recipients or subrecipients about when and how to dispose of the records. There is an interesting hint contained in the policy, however, about access to the records by officials of the federal awarding agency, its inspector general, the Comptroller General of the United States, and any of their duly authorized representatives. This wording also, perhaps, highlights the vulnerability of retaining grant records any longer than needed. The applicable section states, “The rights of access... are not limited to the required retention period but shall last as long as the records are retained.” In other words, as long as the institution has them, they can be examined.

Many grantee and subgrantee organizations are probably guilty of some inertia when it comes to records retention. They simply don’t get around to routine disposal of records, and the abundance of caution that often surrounds federal grant management can reinforce their tendencies. However, if everyone does what they are supposed to do (financial and performance reporting, auditing, and audit resolution) in the timely manner required by the applicable federal policies, the three-year record retention period should be more than enough time to complete the required tasks. In the exceptional case where any litigation, claim, or audit is started before the expiration of the three-year period, the requirements direct the recipient to extend the time period until all matters related to those events are resolved and any final action is taken.

In conclusion, a records disposal policy that is solidly grounded in the cited requirements is probably a good idea. It’ll reduce an organization’s exposure and probably save a significant amount of storage space. The method used for disposal is up to the institution.
How to Work with Internal Audit: Leveraging Internal Audit for Success

Raina Rose Tagle, Kimberly Ginn, and Ashley Deihr, Baker Tilly

Beyond “Gotcha:” The Role of Internal Audit in Today’s University

Who doesn’t have a horror story about interacting with auditors? Tales abound of auditors who showed up unannounced and demand to have hundreds of pages of documentation photocopied, questioned legitimate expenses due to lack of knowledge, or re-filed the department’s documentation in the wrong order. Internal auditors are sometimes perceived as the “bad guys” or “watchdogs,” leading many university personnel to be uncomfortable with or wary of working with internal audit.

But there is good news! A paradigm shift has been occurring over the past few years in how internal audit professionals operate. In fact, if you play your cards right, modern internal audit departments can be pleasant to work with, and even helpful. If you haven’t already, sometime in your career you will almost certainly interact with internal auditors, so why not make the best of it?

This article is the first in a three-part series that examines best practices in working with internal audit, including hints for making the experience go more smoothly (and hopefully, for staying out of trouble!). This first article provides background on the profession, contrasts the goals of traditional and more modern internal audit functions, and reviews types of internal audit projects and how these projects can actually be helpful. In the second article, we will describe the nuts and bolts of the internal audit process and provide terminology for “talking the talk” when interacting with internal auditors. The third article will provide specific ideas for leveraging internal audit to help your department, whether your institution’s internal audit model is traditional or more modern. Look for the second and third articles in upcoming issues of NCURA Magazine.

Traditional versus Modern Approaches to Internal Audit

In recent years, “modern” internal auditors have expanded their focus beyond just having “findings” in the form of inappropriate expenses or inaccurately recorded costs to proactively assisting organizations with enhancing internal controls, increasing efficiencies, and optimizing processes. These internal auditors collaborate with auditees to understand how things happen today, what could go wrong, and what needs to change to strengthen internal controls, keeping in mind the goals of the department and the need to be as efficient as possible with limited resources. These auditors will summarize “observations” regarding risks to the auditees, make “recommendations” for enhanced internal controls or efficiency measures that could mitigate the risks, and assist departments in making necessary changes. “Modern” internal audit departments are designed to help, and we aim to give you the tools you need to leverage their skills to the benefit of your department and institution (Figure 3120.5-1).

1 This article is reprinted from the NCURA Magazine, January/February 2010, Volume XLII, No. 1, published by the National Council of University Research Administrators. It is used with permission of the publisher.
Internal Audit Engagements

It is important to remember that internal auditors do more than just financial audits (although this is still an important part of their job in order to protect the assets of your organization). Internal auditors perform several other types of engagements, as well. It is sometimes possible for a department to request an audit. Understanding the various types of audit activities may help you to get the most out of the experience:

◆ Compliance Audits: Reviewing a department or process to assess compliance with relevant internal policies and procedures, as well as external regulations. For example, internal auditors might review the institution’s cost-sharing policy for compliance with Office of Management and Budget Circular A-21 and National Institutes of Health and other sponsor requirements.

◆ Operational Audits: Reviewing a department or process to identify ways to make it work better or to use fewer resources. For example, internal auditors might review the operations of the procurement department to validate that the best choices are being made to save the university money, while still making purchases in a timely manner.

◆ Risk Assessments: Looking at everything that could go wrong in an institution (including the possibility of missed opportunities), and determining what the biggest risks are. Internal audit generally performs an entity-wide risk assessment on an annual basis to provide the foundation for its annual audit plan; however, it may also perform a risk assessment for a school or department. For example, prior to performing a financial audit at the medical school, internal auditors might perform a risk assessment in order to determine what departments are more likely to have something go wrong, and then focus audit efforts on those departments.

◆ Fraud Investigations: Examining allegations of fraud and performing a variety of audit procedures, including detailed testing, interviews, and analytical assessments, to determine whether fraud has occurred, how it occurred, and what amount of money and other assets were involved. For example, internal auditors at many institutions are responsible for investigating allegations made via the university’s anonymous hotline.
Positive Impacts of Internal Audit Engagements

Each of these types of engagements can have positive impacts, both for the university as a whole and for the department being reviewed. At an institution-wide level, internal audit can provide a comprehensive and concise view of risk throughout the organization, help management and administrators to balance competing priorities with limited resources, and provide practical advice for streamlining processes and strengthening internal controls.

At a departmental level, your internal auditors can also provide valuable assistance by:

◆ Helping to identify fraud, waste, or abuse in your group that could be jeopardizing your mission or wasting resources. If one of your researchers were stealing valuable equipment, you’d want to know, right?

◆ Reviewing your processes and internal controls, and sharing relevant recommendations to improve efficiency and compliance in your department. You may be pleasantly surprised to find that, rather than adding additional bureaucratic levels, an audit could actually include recommending the removal of unnecessary controls!

◆ Having a strong voice that gets management’s attention, support, and funding for changes such as additional resources, enhanced processes or better systems via internal audit’s usually direct reporting relationship to senior management and the audit committee of the board of trustees. For example, your internal auditors might recommend that your department cannot function effectively without an additional administrative FTE. Wouldn’t it be nice to get some additional help?

We hope that you will start to put some of this knowledge into practice – not only to survive the audit process but also to add value to your organization.

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Leveraging Internal Audit for Success
Raina Rose Tagle, Kimberly Ginn, and Ashley Deihr, Baker Tilly

Surviving an Audit: The Basics
When you get a notification that your department will be audited, what is your first thought? Is it, “Wait, who is coming? Why my department? What will I have to do? And how long is this going to last?”

Welcome back to our three-part series on working with internal audit, including some insight into these questions and hints for staying out of trouble. In the first article, we discussed the past, present, and future of the internal audit profession and how certain types of internal audits can actually be helpful. In this second article, we share with you the nuts and bolts of the internal audit process and provide terminology for “talking the talk” when interacting with internal auditors. Look for our third article, offering specific ideas for leveraging internal audit to help your department, in an upcoming issue of NCURA Magazine.

Like many disciplines, internal auditors are guided by a professional association that promulgates standards, provides certifications, and shares best practices for the profession (see the Institute of Internal Auditors (IIA) website at www.theiia.org). While common components comprise most internal audit processes, HOW the audit process unfolds will be impacted by your internal auditor’s mentality (e.g., “gotcha” versus helpful ally) and can be greatly influenced by your taking proactive steps to make the process go more smoothly. To arm you with knowledge and tactics to enhance your experience with internal audits, we outline participants in the audit process, the typical phases in the process, approaches for addressing prevalent challenges, and key terminology.

Participants in the Audit Process
A solid first step in surviving an audit is understanding where you fit into the process. Depending on your institution and the audit scope, there could be a handful or more than a dozen of individuals participating in the audit process, typically including the following:

Audit Committee: This Board of Trustees committee oversees the performance of the internal audit function, approves the annual plan drafted by internal audit, and reviews the audit results. Internal audit’s ultimate fealty is to the audit committee.

Executive Leadership and Management: On a day-to-day basis, internal auditors report administratively to one or more members of the institution’s executive leadership, such as a chief financial officer or an executive vice president. Internal audits should work collaboratively with executive management on annual audit planning, and should share audit results with management before reporting to the audit committee.

1 This article is reprinted from the NCURA Magazine, March/April 2010, Volume XLII, No. 2. It is used with permission of the publisher.
Department: Each internal audit addresses the activities of one or more departments – either an academic area (such as biology or mechanical engineering) or a functional area (such as sponsored research or procurement). Ideally, internal auditors gain context for the audit by discussing the department’s strategies and operations with the head of the department, and collaborate with department administration to accomplish the audit.

Process Owner: Internal auditors work with “process owners” to understand policies, procedures, and internal controls at a detailed level. For example, the head of the accounts payable function may be the process owner for payment of vendor invoices.

The Audit Process and How You Fit In
So, you may be asking, “How can I help in this process?” Or, perhaps more likely, “How can I make this process easier for me?” Well, start by understanding the overall audit process and specific actions that you can take to minimize the pain involved in an audit.

In the following sections, we outline challenges that you may encounter when you’re being audited and related ways to influence the audit process for the betterment of the audit, your department, and your institution.

Figure 3120.6-1. Most internal audits involve four phases

<table>
<thead>
<tr>
<th>Phase 1 - Audit Planning</th>
<th>Phase 2 - Access Design of Internal Controls</th>
<th>Phase 3 - Test Transactions and Analyze Results</th>
<th>Phase 4 - Reporting</th>
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<tbody>
<tr>
<td>Determine the audit objectives, scope, timing, and necessary resources to conduct the audit</td>
<td>Gather information about the process to be audited, and assess the adequacy of internal controls.</td>
<td>Conduct interviews, test transactions, analyze the results of the testing, and formulate preliminary observations and findings.</td>
<td>Communicate the results of the audit to the department, management, and the audit committee.</td>
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</table>

Phase I – Audit Planning
In the Audit Planning phase, the auditors determine their objectives, scope, timing, and resources needed for the audit. At this point, the auditors have decided broadly what they are going to audit (e.g., the effort reporting process). However, the specific faculty and staff, time period, department, and other foci may not yet have been decided, and this is where you can provide input.

Figure 3120.6-2. Phase I – Audit Planning

<table>
<thead>
<tr>
<th>Audit Challenges</th>
<th>Suggested Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inefficiency and Disruption to Operations: The auditors do not know whom to ask for what types of information, so they ask everyone for everything, resulting in duplicated effort (on your part!).</td>
<td>Designate an Audit Liaison: Assign an audit liaison from your department to work directly with the auditors, enabling more direct and effective communication. Likewise, ask your internal audit team to designate a main point of contact for your department.</td>
</tr>
<tr>
<td>Miscommunication: The auditors ask for something (using their terminology, not yours) and you try to respond, but give them the wrong thing.</td>
<td>Educate the Auditors: Take the time to teach the auditors how you describe your department so that you are speaking the same language. Educate Yourself: Understand and use audit lingo to bridge any communication gap (and re-read this article!).</td>
</tr>
</tbody>
</table>
Supplementary Material

<table>
<thead>
<tr>
<th>Audit Challenges</th>
<th>Suggested Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduling Issues: The auditors are asking for large quantities of documentation, but your staff is busy with month-end reporting.</td>
<td>Proactively Share Conflicts: Provide your schedule and any timing constraints to the auditors as soon as you are notified of a pending audit.</td>
</tr>
<tr>
<td>No New Information: The auditors have a bunch of findings, but you already knew about all of them. Now they have wasted your time and the institution’s resources by taking your watch to tell you what time it is.</td>
<td>Disclose Known Issues: Outline your department’s strengths and weaknesses so that the internal auditors will spend less time finding things that you already know and will potentially allocate more time to collaborating with you on practical solutions to address your department’s issues.</td>
</tr>
<tr>
<td>Confusion about the Audit’s Purpose: You don’t understand why your department was selected and why you have to do what amounts to a second job in supporting the audit.</td>
<td>Ask Questions: To increase your ability to provide the auditors with what they need, ask the auditors how the audit area was selected. It could be the result of a theft of petty cash, a process new to your institution (such as automated effort reporting), an area of focus for government auditors (such as human subject privacy or direct charging of administrative costs), or a request from the audit committee.</td>
</tr>
</tbody>
</table>

**Phase 2 – Assess Design of Internal Controls**

In this phase, the auditor gathers information about the process to be audited and assesses the adequacy of internal controls. Auditors use the information learned through the first two phases to design the audit work program, including any transaction testing procedures that they may plan to perform in order to assess compliance with your specific policies, procedures, and/or sponsor requirements.

**Figure 3120.6-3. Phase 2 – Assess Design of Internal Controls**

<table>
<thead>
<tr>
<th>Audit Challenges</th>
<th>Suggested Actions</th>
</tr>
</thead>
</table>
| Misunderstanding of Your Processes and Controls: The auditors can’t seem to understand how your processes work. | **Illustrate:** Use real life documents to show exactly how the process works. Invite the auditors to sit with you and observe as you perform your responsibilities that relate to the audit.  
**Describe the Department’s Activities:** Remember that auditors are generally not scientists. Walk them through the scientific aspects of your programs at a high level to enable them to understand better the purpose of your research and the related financial transactions. For example, the auditors may question non-travel-related food items that are not typically allowed to be charged to a grant. If you have explained that your human research subjects donate blood, then the auditors will be more likely to understand the appropriateness of charging the cost of cookies and orange juice to a grant.  
**Review the Work before Conclusions Are Made:** Ask to review the draft documentation that the auditors create of your processes and controls to ensure their accuracy before the auditors design testing plans, or report control weaknesses, based on this documentation. |

**Phase 3 – Test Transactions and Analyze Results**

This phase can include gathering documentation, conducting interviews, performing testing procedures, analyzing the results of the testing, and formulating preliminary observations and findings.
### Figure 3120.6-4. Phase 3 – Test Transactions and Analyze Results

<table>
<thead>
<tr>
<th>Audit Challenges</th>
<th>Suggested Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excessive Documentation Requested:</strong> The auditors</td>
<td>Confirm the Need Before Providing Documentation:</td>
</tr>
<tr>
<td>are asking for WAY too much documentation for your</td>
<td>Discuss with the internal auditor in detail the intended</td>
</tr>
<tr>
<td>department to handle, or are asking for unnecessary</td>
<td>use of requested documentation before you begin to</td>
</tr>
<tr>
<td>documentation.</td>
<td>gather it. Channel all requests for information through your</td>
</tr>
<tr>
<td></td>
<td>department audit liaison, who can then coordinate the</td>
</tr>
<tr>
<td></td>
<td>responsibilities for gathering the documentation within</td>
</tr>
<tr>
<td></td>
<td>the department.</td>
</tr>
<tr>
<td><strong>Questions, Questions, Questions:</strong> The auditors keep</td>
<td>Organize: Clearly label and organize the documentation</td>
</tr>
<tr>
<td>coming back to you with follow-up questions on the</td>
<td>that you provide. Ask a colleague to double-check the completeness,</td>
</tr>
<tr>
<td>documentation provided.</td>
<td>accuracy, and organization of the information before you provide it to the</td>
</tr>
<tr>
<td></td>
<td>internal auditors.</td>
</tr>
<tr>
<td><strong>Missing Documentation:</strong> Oh no! I can’t find</td>
<td>Schedule Regular Check-ins: Encourage the auditors</td>
</tr>
<tr>
<td>supporting receipts for travel.</td>
<td>to ask you follow-up questions in a structured way. For example, hold a weekly</td>
</tr>
<tr>
<td></td>
<td>status call or ask the audit team to send questions via email only when they</td>
</tr>
<tr>
<td></td>
<td>have amassed a number of questions.</td>
</tr>
<tr>
<td><strong>Ridiculous Audit Findings:</strong> The auditors are</td>
<td>Explore Alternatives: If you cannot locate certain source</td>
</tr>
<tr>
<td>being overly critical and have many findings.</td>
<td>documentation, let the auditors know before you spend</td>
</tr>
<tr>
<td></td>
<td>30 hours looking for a taxicab receipt. Quite possibly, the auditors can</td>
</tr>
<tr>
<td></td>
<td>perform alternate procedures or will accept another type of documentation.</td>
</tr>
<tr>
<td></td>
<td>Think creatively about what might substantiate a particular transaction (e.g.,</td>
</tr>
<tr>
<td></td>
<td>an internal travel itinerary combined with a credit card receipt to support an</td>
</tr>
<tr>
<td></td>
<td>airfare expense).</td>
</tr>
</tbody>
</table>

### Phase 4 – Reporting

The objective of this Reporting phase is to communicate the results of the audit to the auditee, management, and the audit committee.

### Figure 3120.6-5. Phase 4 – Reporting

<table>
<thead>
<tr>
<th>Audit Challenges</th>
<th>Suggested Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Surprise Findings:</strong> The final report includes</td>
<td>Review the Draft Report: Encourage the auditors to allow you to review a draft of</td>
</tr>
<tr>
<td>observations and recommendations that you’ve not</td>
<td>the report before it is shared with management. This will enable you to discuss</td>
</tr>
<tr>
<td>heard previously.</td>
<td>key issues that were not brought to your attention, as well as correct any</td>
</tr>
<tr>
<td></td>
<td>factual errors regarding your processes, controls, or findings.</td>
</tr>
<tr>
<td><strong>React Timely:</strong> Instead of ignoring the auditors and</td>
<td></td>
</tr>
<tr>
<td>then complaining when the final report doesn’t reflect</td>
<td></td>
</tr>
<tr>
<td>your input (or the facts!), provide feedback to the</td>
<td></td>
</tr>
<tr>
<td>auditors on the draft report within the requested</td>
<td></td>
</tr>
<tr>
<td>timeframes.</td>
<td></td>
</tr>
<tr>
<td>&quot;Unrealistic Recommendations:** They want us to do</td>
<td>Urge Practicality: When you review the report, pay</td>
</tr>
<tr>
<td>what?</td>
<td>particular attention to the recommendations made by the auditors. Speak up when</td>
</tr>
<tr>
<td></td>
<td>you know that these recommendations will be difficult to implement in your</td>
</tr>
<tr>
<td></td>
<td>department. The auditors may be able to alter the recommendations, or suggest</td>
</tr>
<tr>
<td></td>
<td>changes outside of your department to facilitate implementation. For example, if</td>
</tr>
<tr>
<td></td>
<td>you are asked to perform monthly financial reviews of a researcher’s accounts,</td>
</tr>
<tr>
<td></td>
<td>auditors can state in the report that you should be given access to those reports</td>
</tr>
<tr>
<td></td>
<td>online.</td>
</tr>
</tbody>
</table>
**Key Terminology**

The following summarizes the key activities and “buzz” words related to the audit process, organized by phase of the audit:

**Phase 1 - Audit Planning**
- **Risk Assessment**: The process of reviewing an institution’s operations and determining the areas of greatest exposure.
- **Audit Plan**: The annual blueprint for what areas will be reviewed by internal audit, created based on the results of the Risk Assessment.
- **Opening Conference**: The initial meeting between internal audit and department management and process owner(s), discussing the audit work to be performed.
- **Audit Scope and Approach**: The areas that the audit will address (Scope) and the related audit activities (Approach).
- **Information Request**: List of files, policies, procedures, or other information that internal audit will need to complete its work.
- **Process**: Series of activities or tasks that produces a specific outcome (e.g., charging costs to a grant).

**Phase 2 - Assess Design of Internal Controls**
- **Interviews**: Meetings with knowledgeable personnel to better understand the processes and operations of the department.
- **Process Documentation**: Visual representation of the flow of information or work steps involved in completing specific processes.
- **Internal Control**: A process, including policies, procedures, monitoring techniques, and attitudes, that helps to achieve a desired result.
- **Design of Controls**: How well internal controls would address related risks if the controls operated as intended.
- **Risk Mitigation**: Actions taken to reduce the exposure/impact of what could go wrong.
- **Audit Work Program**: Detailed procedures that guide internal audit in the completion of the project.

**Phase 3 - Test Transactions and Analyze Results**
- **Fieldwork**: Action steps necessary for internal audit to carry out their work to achieve the objectives of the audit.
- **Testing Procedures**: Processes for determining the effectiveness of controls and existence of risk(s); may include sample selection, interviews, process walkthroughs, and transaction testing.
- **Audit Findings**: Observations noted during fieldwork that are inconsistent with proper practices; findings typically highlight an increased risk to the institution/
organization or a failure of controls.
◆ Recommendations: Suggested changes or enhancements to policies or processes to strengthen internal controls or improve efficiency and effectiveness.

**Phase 4 - Reporting**
◆ Draft Audit Report: The result of internal audit’s work, typically in a memo form detailing the audit’s background and scope, work performed, summary of observations, and recommendations.
◆ Closing Conference: Review of the draft report with department management and/or process owner(s) to ensure understanding and agreement among both parties before information is shared with executive management.
◆ Management’s Response: Management’s reaction to the audit report, and its plan for addressing the observations and recommendations raised.
◆ Final Audit Report: Version of the audit report, including Management’s Response, which is presented to the Audit Committee and signifies the completion of the audit.

You have probably noticed that communication is a pervasive theme throughout this article, both by the auditors and by the audit participants. If you feel out of the loop, contact your internal auditor as soon as possible. Remember that internal auditors are people, too (hey, we know what you’re thinking!). Your proactive attention and engagement can go a long way toward making an audit more useful, and less painful, for you and your department.

**About the Authors**
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Kimberly Ginn is a Senior Manager at Baker Tilly.
Ashley Deihr is a Manager at Baker Tilly.
3120.7  **Tips for Owning Your Next A-133 Audit¹**
Adrienne Larmett, Ashley Deihr, and Kimberly Ginn, Baker Tilly

**Introduction**
Audit: a word synonymous with panic...dread...root canal. Let’s face it; audits are not always the most pleasant of experiences. In fact, there are a number of other activities we would rather be focused on, such as managing high-risk subrecipients, memorizing export control regulations, or reading the new Office of Management and Budget (OMB) Uniform Guidance cover to cover. However, if your institution expends more than $500,000 (increasing to $750,000 come December 26, 2014) in federal funds or awards per year, you must submit to a single audit, more commonly known as the OMB Circular A-133 audit (or “A-133 audit” for short), on an annual basis.

On a scale from “Internal Audit” to “Office of Inspector General Audit,” the A-133 audit falls somewhere in the middle in terms of the level of stress induced. Traditionally the A-133 audit has been the federal government’s way of obtaining reasonable assurance, via an independent third party auditor (i.e., a certified public accounting firm), that institutions are being good stewards of federal award funds and are in compliance with applicable federal, state, sponsor, and other award-specific regulations. Many view the A-133 audit as a “necessary evil”- something that has to be done in order for your institution to receive the funding to perform some really fantastic research.

Although the A-133 audit is routine and fairly standard from year to year, it has a way of turning even the most proactive managers into reactive participants. Even when you have a great relationship with your A-133 auditors, the process can sometimes feel like an advanced game of “fetch”. But it doesn’t have to be that way! Below we outline some tips for taking back control of your next A-133 audit.

**Tips for owning the audit process**

1. **Designate a Dedicated Audit Liaison**
Many institutions allocate relatively small portions of time from a number of their Post-Award and Grant Accounting Directors and Managers to the A-133 audit. Unfortunately, this takes research administrators away from their key functions and can hinder your day-to-day operations. One best practice is to assign a dedicated audit liaison whose sole responsibility during the A-133 audit is to interact with the external audit team and coordinate your institution’s response (e.g., meetings, document requests, logistics, etc.) By having a designated audit liaison, the audit process will go more smoothly, research administrators will be able to focus on their core job responsibilities (administering research!), and the audit will not detract from institutional operations. Depending on the size of your institution this person does not have to be full time, and may work on other compliance activities during other times of the year.

¹ This article is reprinted from the *NCURA Magazine*, October / November 2014, Volume XLVI, No. 5. It is used with permission of the publisher.
2. Make Logistics Work for You
Auditors often prefer that your institution use the audit firm’s technology (e.g., Sharepoint sites) for document uploads, which can be time-consuming and inconvenient for your institution. Discuss these logistics at the beginning of the audit process and agree upon a sharing mechanism that works for your institution as well as the audit team. This will ultimately enable you to meet document request deadlines and keep the audit timeline moving forward while not overburdening your institutional resources.

3. Hold Auditors to a Time Schedule
It can sometimes feel that auditors create a “one-way street” with deadlines. The auditors may set seemingly unreasonable timelines for your institution, or want to hold meetings according to their schedules. To avoid these timing challenges, develop and agree to a joint timeline upfront, and hold the team accountable to that schedule. In addition, encourage the participation of audit managers and partners throughout the audit so that they are informed of any issues in a timely manner. This may help prevent a last minute time crunch during audit manager or partner review.

4. Educate your A-133 audit team
You know your institution better than anyone. Consider sharing policies, processes, documented controls etc. with your audit team in advance; it can help save time (and frustration) on the tail-end.

5. Be Prepared and Responsive
Being prepared allows you to more easily and quickly respond to questions and requests. To prepare:
◆ Review meeting agendas and understand the purpose of each meeting in advance.
◆ Review and have all documentation readily available.
◆ Anticipate questions related to the documentation requested.
◆ Maintain documentation of your procedures, systems, and internal controls.
◆ Re-familiarize yourself and your team with your protocols, controls, and records.
◆ Know and understand relevant regulations and guidance.
◆ Document appropriate approvals and maintain an audit trail of supporting documentation.
◆ Establish a method to leverage lessons learned from past audits.

6. Listen Carefully
Listen carefully in order to understand the auditor’s questions before answering. Ask for clarification when you do not understand the auditors’ questions, assumptions, or conclusions. Rather than debating, try to clarify misunderstandings with positive rather than negative statements.
7. Answer the Question Being Asked
   ◆ Provide only the requested information. Don’t answer unasked questions.
   ◆ Respond to questions with straightforward, honest, and complete answers.
   ◆ Remember that it’s ok to say, “I don’t know, but I will get back to you with the answer.”
   ◆ Limit your answers and comments to areas where you have first-hand knowledge and/or supporting documentation. If you don’t have the information, rather than speculating, bring in the correct person to provide the answer.
   ◆ Politely decline to answer questions you don’t fully understand until a central administrative contact within your department or school is present.

8. Participate Actively
Don’t be a passive participant in meetings. Rather, make it a point to take notes (e.g., questions asked and answers given, documents requested and provided, discussions of complex issues), keep copies of documents provided, and ensure that all original records provided to the audit team are returned at the end of the audit. In addition, use meetings as an opportunity to learn from your auditors, including ways to improve the process for next time, or how to better document controls.

9. Don’t Wait for Reporting and Findings
If, in the course of the audit, you find inappropriate charges or inadequate procedures (e.g., untimely cost transfers, unallowable charges), resolve the issue immediately rather than waiting for the audit report to be finalized.

10. Don’t Always Accept Initial Findings
If findings are stated, work through them with the auditors. Provide additional documentation or back-up to support your position. This will enable the audit team to make a full evaluation of the situation and potentially come to a different conclusion. While your institution has the right to dispute findings, under certain circumstances it may be best to accept a finding gracefully and work to correct the error as soon as possible.

11. Be Professional at All Times
The audit team is most likely working in your office and may be listening to or observing your behavior and comments.

Conclusion
The A-133 audit process will always present complexities and unforeseen challenges. However, it does not have to perpetually invoke your “fight or flight response.” By taking ownership, planning, and adopting a proactive, positive attitude, your institution can take meaningful steps to make the process less stressful and mutually beneficial to all parties.
About the Authors

Adrienne Larmett, MBA, is a Senior Consultant with the Higher Education and Research Institutions practice at Baker Tilly. With more than 11 years of experience, Adrienne specializes in sponsored research compliance, and grants administration consulting. Prior to joining Baker Tilly, she worked in research administration positions at Temple University and the University of Pennsylvania.

Ashley Deihr, CPA, CFE, is a Manager with the Higher Education and Research Institutions practice at Baker Tilly. With 10 years of experience, Ashley specializes in sponsored research compliance, and financial accounting and management.

Kimberly Ginn, CIA, is a Partner with the Higher Education and Research Institutions practice at Baker Tilly. With more than 13 years of experience, Kimberly provides consulting services to many higher education institutions, with a specific focus on sponsored research operations and compliance. Prior to joining the firm, Kimberly worked as internal auditor for the Department of Defense Office of Inspector General conducting contract, procurement, and environmental audits.
3120.8 **Federal Agencies Single Audit Contacts for UG Implementation**

Council on Financial Assistance Reform

The list below of agency point of contacts is available to address questions from the grantee and audit communities related to the implementation of the Uniform Guidance.

Contact the National Single Audit Coordinators when you have a technical audit question regarding your single audit such as the determination of your Federal cognizant or oversight audit agency, the due date for audit submission, major program determination, identification of direct and material compliance requirements or single audit quality issues.

Contact the SA Key Management Liaisons when you have a question that is directly related to a specific Federal program such the applicability of the administrative, cost and Single Audit requirements for that program, the prior approval process on certain costs for that program, the due date for financial or technical reports or resolution of single audit findings for that program.

**Figure 3120.8-1. Single Audit Contacts**

<table>
<thead>
<tr>
<th>Agency</th>
<th>SA Senior Accountable Officials</th>
<th>SA Key Management Liaisons</th>
<th>National SA Coordinators</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHS</td>
<td>Ellen Murray</td>
<td>Amy Haseltine (<a href="mailto:Amy.Haseltine@hhs.gov">Amy.Haseltine@hhs.gov</a>), David Baker (<a href="mailto:David.Baker@hhs.gov">David.Baker@hhs.gov</a>)</td>
<td>Tammie Brown (<a href="mailto:tammie.brown@oig.hhs.gov">tammie.brown@oig.hhs.gov</a>)</td>
</tr>
<tr>
<td>DoT</td>
<td>Brodi Fontenot</td>
<td>Patrick Nemons (<a href="mailto:Patrick.Nemons@dot.gov">Patrick.Nemons@dot.gov</a>)</td>
<td>John Sysak (<a href="mailto:john.r.sysak@oig.dot.gov">john.r.sysak@oig.dot.gov</a>)</td>
</tr>
<tr>
<td>USAID</td>
<td>Steve Tashjian</td>
<td>Tashjian, Steve (M/DAOA/CAS) (<a href="mailto:sttashjian@usaid.gov">sttashjian@usaid.gov</a>)</td>
<td>Steve Shea (<a href="mailto:Sshea@usaid.gov">Sshea@usaid.gov</a>)</td>
</tr>
<tr>
<td>NSF</td>
<td>Dale Bell</td>
<td>Alex Wynnyk (<a href="mailto:awynnyk@nsf.gov">awynnyk@nsf.gov</a>)</td>
<td>Laura Rainey (<a href="mailto:lrainey@nsf.gov">lrainey@nsf.gov</a>)</td>
</tr>
<tr>
<td>ED</td>
<td>Tom Skelly</td>
<td>Phillip Juengst (<a href="mailto:Phillip.Juengst@ed.gov">Phillip.Juengst@ed.gov</a>)</td>
<td>Bernie Tymes (<a href="mailto:Bernie.tymes@ed.gov">Bernie.tymes@ed.gov</a>)</td>
</tr>
<tr>
<td>DHS</td>
<td>Chris Cuminkey</td>
<td>Andrea Brandon (<a href="mailto:Andrea.Brandon@hhs.gov">Andrea.Brandon@hhs.gov</a>)</td>
<td>Nasr.Fahmy (<a href="mailto:Nasr.Fahmy@dhs.gov">Nasr.Fahmy@dhs.gov</a>)</td>
</tr>
<tr>
<td>DoD</td>
<td>TBD</td>
<td>TBD</td>
<td>Carol Vogler (<a href="mailto:carol.vogler@doj.gov">carol.vogler@doj.gov</a>)</td>
</tr>
<tr>
<td>EPA</td>
<td>David Bloom</td>
<td>Howard Corcoran (<a href="mailto:corcoran.howard@epa.gov">corcoran.howard@epa.gov</a>)</td>
<td>Leah Nikaidoh (<a href="mailto:leah.hanaid@epamail.epa.gov">leah.hanaid@epamail.epa.gov</a>)</td>
</tr>
<tr>
<td>USDA</td>
<td>Peggy Jannery</td>
<td>Peggy Jannery (<a href="mailto:Peggy.Jannery@cfr.usda.gov">Peggy.Jannery@cfr.usda.gov</a>)</td>
<td>Marbie Baugh (<a href="mailto:marbie.baugh@oig.usda.gov">marbie.baugh@oig.usda.gov</a>)</td>
</tr>
<tr>
<td>HUD</td>
<td>Joe Hungate</td>
<td>Richard Robinson (<a href="mailto:Richard.Robinson@hhs.gov">Richard.Robinson@hhs.gov</a>)</td>
<td>Karen Cookson (<a href="mailto:kcookson@hudoig.gov">kcookson@hudoig.gov</a>)</td>
</tr>
<tr>
<td>USDJ</td>
<td>Maureen Hennenberg</td>
<td>LeToya Johnson (<a href="mailto:LeToya.Johnson@usdoj.gov">LeToya.Johnson@usdoj.gov</a>)</td>
<td>Carol Taraska (<a href="mailto:carol.s.taraska@usdoj.gov">carol.s.taraska@usdoj.gov</a>)</td>
</tr>
<tr>
<td>DoE</td>
<td>Thomas Griffin</td>
<td>Robert Myers (<a href="mailto:Robert.Myers@hq.hhs.gov">Robert.Myers@hq.hhs.gov</a>)</td>
<td>Daryl Ross (<a href="mailto:daryl.ross@hq.hhs.gov">daryl.ross@hq.hhs.gov</a>)</td>
</tr>
<tr>
<td>DoL</td>
<td>Laura Watson</td>
<td>Steve Daniels (<a href="mailto:Steve.Daniels@doj.gov">Steve.Daniels@doj.gov</a>)</td>
<td>Melvin Reid (<a href="mailto:reid.melvin@doj.gov">reid.melvin@doj.gov</a>)</td>
</tr>
<tr>
<td>State</td>
<td>Chris Flaggs</td>
<td>Carole Clay (<a href="mailto:clay@state.gov">clay@state.gov</a>)</td>
<td>Zoraymas Torres-Alvarez (<a href="mailto:Torres-alvarez@state.gov">Torres-alvarez@state.gov</a>)</td>
</tr>
<tr>
<td>DoC</td>
<td>Barry Borkowitz</td>
<td>Gary Johnson (<a href="mailto:gjohnson@doc.gov">gjohnson@doc.gov</a>)</td>
<td>Patricia Henry (<a href="mailto:PHenry@oig.doc.gov">PHenry@oig.doc.gov</a>)</td>
</tr>
<tr>
<td>NASA</td>
<td>Frank Peterson</td>
<td>William Roets (<a href="mailto:William.Roets-1@nasa.gov">William.Roets-1@nasa.gov</a>)</td>
<td>Mark Jenson (<a href="mailto:mark.jenson@nasa.gov">mark.jenson@nasa.gov</a>)</td>
</tr>
<tr>
<td>DoL</td>
<td>Douglas Glenn</td>
<td>Debra Sonderman (<a href="mailto:Debra_Sonderman@ios.doj.gov">Debra_Sonderman@ios.doj.gov</a>)</td>
<td>Morgan Aronson (<a href="mailto:morganaronson@doioig.gov">morganaronson@doioig.gov</a>)</td>
</tr>
<tr>
<td>CNCS</td>
<td>Dana Bourne</td>
<td>Rhonda Honegger (<a href="mailto:rhonegger@cns.gov">rhonegger@cns.gov</a>)</td>
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<td>Nicki Jacobs (<a href="mailto:jacobsn@arts.gov">jacobsn@arts.gov</a>)</td>
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### Single Audit Contacts

Contact the National Single Audit Coordinators when you have a technical audit question regarding your single audit such as the determination of your Federal cognizant or oversight audit agency, the due date for audit submission, major program determination, identification of direct and material compliance requirements or Single audit quality issues.

Contact the SA Key Management Liaisons when you have a question that is directly related to a specific Federal program such the applicability of the administrative, cost and Single Audit requirements for that program, the prior approval process on certain costs for that program, the due date for financial or technical reports or resolution of single audit findings for that program.

<table>
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<tr>
<th>Agency</th>
<th>SA Senior Accountable Officials</th>
<th>SA Key Management Liaisons</th>
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<td>NEH</td>
<td>Jeff Thomas</td>
<td>Robert Straughter (@neh.gov)</td>
<td>Laura Davis (@neh.gov)</td>
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<td>IMLS</td>
<td>Chris Catignani</td>
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<td>ONDCP</td>
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<td>Phuong deSear (@ondcp.eop.gov)</td>
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</table>
This section includes practical guidance and tools — checklists, flowcharts, etc. — relating to interactions with auditors. These materials are culled from a variety of authoritative sources.

**Checklist of Documentation Practices for Audit Follow Up**

AIS editors

OMB Circular A-133 provides only broad guidance regarding follow-up on prior audit findings. It is up to the awarding agencies and recipient institutions to determine the kinds of documentation and tracking systems to use to accomplish basic audit follow-up. The following is a list of suggested practices:

- An official audit resolution file should be established for each audit report.
- Each file should contain, at a minimum, the following documents:
  - audit report data obtained from the Federal Audit Clearinghouse (http://harvester.census.gov/sac)
  - a listing of the audit findings requiring resolution
  - a copy of the audit report or pages of the audit report that provide relevant information to the resolution of the audit findings, including the findings, the auditee’s corrective action plan or response to the findings, the section on the status of prior year findings, and the portion of the Schedule of Expenditures of Federal Awards relating to the findings
  - a listing of the triage decisions for each audit finding
  - documentation of all correspondence/communication with the auditee, the auditor, and other appropriate individuals, including corrective action plans and necessary work papers
  - a copy of any final determination letters or management decisions issued
  - an audit clearance document indicating that all corrective actions have been taken
  - documentation pertaining to audit follow-up activities, e.g., documentation from the auditee substantiating the corrective action taken, results of any monitoring visits, relevant information from the next year’s audit that reports whether appropriate corrective action was taken on a prior year finding
  - documented evaluations or conclusions that support the adequacy of the corrective actions taken by the auditee

◆ Each official file should also contain, as appropriate, the following documents:
  • documented evidence of technical assistance provided
  • comments from legal counsel or independent audit personnel
  • any necessary concurrences for resolution of findings involving large amounts of questioned costs
  • documents concerning any unique circumstances
Checklist for Conducting an Entrance Conference.

When arranging for an entrance conference between the audit coordinator or team and the auditor field staff consider that this may be the last opportunity for the institution to reach agreement or to reaffirm understandings with the auditors on important aspects of the audit process (see ¶3105.4). Some of the key topics that should be addressed at the entrance conference include the following:

- **Scope of Audit.** Obtain an agreement with the auditors concerning the full scope of the audit, including the extent of testing procedures for the compliance requirements. This could be presented in the form of a “scope document,” which details the overall intent of, as well as topical areas to be covered in, the audit. Identify which of the institution’s activities are considered to be “major programs,” which (if any) related entities, such as affiliated foundations, hospitals, or laboratories, are to be covered, and what methods of obtaining data (transactions to be tested, persons to be interviewed, etc.) the auditors plan to use.

- **Timetable.** Establish a timetable that includes an indication of when the following is likely to happen: information requests will be issued, on-site fieldwork is to begin and end, a draft audit report is available, and a final report is issued. Estimated milestone dates should also be discussed.

- **Compliance Requirements.** If the institution receives funds from any federal grant program that is not listed in the A-133 Compliance Supplement, the institution and the auditors should discuss and agree on what the compliance requirements are for that program. This is simply a matter of making sure that all parties understand and agree on what the applicable requirements are because it is these requirements the auditor will test to reach an opinion on the institution’s compliance.

- **Documents to Be Provided.** Discuss the documents and other information the institution has compiled or intends to make available to the auditors and reach agreement on whether that information is adequate. If not, determine what further information the auditors will require and when the institution will provide it. In this regard, the institution and the auditors should agree on the contact(s) from whom to request the various types of information.

- **Work Papers.** Confirm with the auditors that they will provide the institution with copies of audit work papers as it requests. (This issue should have been addressed as part of the auditor engagement process.) The institution may need access to the work papers if there are adverse findings that it wishes to contest. Equally important, the auditors’ work papers may be an issue if the federal government questions the adequacy of the audit.

- **Potential Adverse Findings.** Obtain the agreement of the audit field staff to discuss potential adverse findings with the institution as problem areas are discovered, ensuring adequate time to correct misunderstandings or resolve potential problems. The institution should schedule frequent meetings, — at least weekly — and maintain daily personal contact with the auditors in order to respond promptly to any questions or concerns.
❑ **Adverse Findings in Draft Form.** Obtain a commitment from the auditors to present any adverse findings not resolved during the field work in draft report form, so the institution can prepare a response for inclusion in the final report. The institution and the auditors also should agree on the circumstances under which the auditors would contact federal officials during the audit. At a minimum, the institution should obtain the commitment of the auditors to inform the institution of such a contact.

❑ **‘Illegal Acts.’** Because findings of “illegal acts” during the audit may require immediate reports to appropriate officials outside of the college or university, the institution should ascertain from the auditors the kind of conduct that they consider to be “illegal acts.” This is an important consideration because the definition of “illegal acts” in *Government Auditing Standards* is not precise, and a report of an illegal act almost certainly will result in further scrutiny (by other audit officials, an agency inspector general, etc.) even if the assertion is ultimately shown to be unfounded.

❑ **Exit Interview.** Obtain a commitment for an exit conference with the field staff so that the institution will have an opportunity to resolve audit findings and anticipate adverse findings that cannot be resolved and will be reflected in the audit report. The institution should consider recording the entrance and exit conferences and, at a minimum, keep minutes of those conferences. (The institution should inform the auditor of its intent to record the exist interview and should provide copies to the auditors to avoid potential misunderstandings.)
\[\textbf{3190} \textbf{Knowledge Check}\]

AIS editors

The Q&As at \[3190.1\] are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3100 has been understood. 

*Note:* For the answer key for \[3190.1\], see \[3190.3\], which appears on a separate page (page 3190:5) for testing purposes.

Discussion topics at \[3190.2\] are designed to engender dialogue among staff on general issues of importance in the field.

\[\textbf{3190.1} \textbf{Q&As}\]

1. The following typically is conducted to ensure the institution has infrastructure to properly manage a particular award in accordance with sponsor guidelines:
   (a) Program-specific audit
   (b) Internal audit
   (c) Entrance conference
   (d) Exit conference

2. Internal controls should be periodically tested for all of the following EXCEPT:
   (a) Compliance
   (b) Location
   (c) Reliability
   (d) Integrity

3. A-133 audits generally are conducted by
   (a) Outside audit firms
   (b) Agency program staff
   (c) Representatives of a federal office of inspector general
   (d) An institution’s general or legal counsel

4. Typically, an audit letter from a federal agency will include all of the following EXCEPT:
   (a) The program or topical area to be covered during the audit
   (b) The estimated start and end dates
   (c) The anticipated amount of time for fieldwork
   (d) The cost of the audit
5. The sample is a test of the whole population and _____ takes the results of the sample and draws conclusions for the entire population. What word(s) complete(s) the blank?

(a) Fieldwork
(b) Extrapolation
(c) Statistical investigation
(d) Corrective action

6. During the course of the fieldwork, the OSP should remain involved by doing all of the following EXCEPT:

(a) Observe the daily activities of and requesting daily status updates from the audit team.
(b) Make a concerted effort to keep the audit on schedule.
(c) Periodically request a listing of any potential questioned costs or findings.
(d) Meet with all individuals to be interviewed by the auditors to “coach” them on the appropriate responses.

7. Final audit reports issued by federal agencies typically do NOT include which of the following sections:

(a) A statement of the scope and objectives of the audit
(b) The institution’s formal written response to the audit findings and recommendations
(c) Names of principal investigators and project staff who were interviewed by the auditors
(d) An executive summary

8. Which of the following is NOT true of OIG audit reports?

(a) They are often available on agency Web sites.
(b) They are usually published in the Federal Register.
(c) They can help an institution become aware of potential areas of federal agency concerns.
(d) They can aid an institution in conducting a self-assessment.

9. According to ¶3105, which of the following is TRUE?

(a) The outcome of an audit is heavily dependent on the institution’s preparedness.
(b) The audit readiness process is standardized from institution to institution.
(c) Background of external auditors is standard across federal agencies.
(d) Once the audit letter is received, little can be done to prepare for audit.

3190.2 Discussion Topics

1. Discuss the differences between internal and external audits. Be sure to include in your discussion “who” is doing the audit in each case and what they are likely to be looking for.

2. Discuss the role of “documentation” as a tool for compliance and as a tool to help an institution prepare for an audit.

3. An institution can proactively evaluate its preparedness and readiness for an audit by conducting a self-assessment of its internal controls. How can this self-assessment process be streamlined? How often should such self-assessment be undertaken? Discuss how published audit reports by the various offices of inspectors general could assist in this effort.

4. Audits can consume much staff time and be disruptive to normal workflow. How can the impact of an audit be mitigated?

5. What is meant by an internal control? What internal controls are in place at your institution and how do they further your institution’s goals of effective grants administration? Is there one set of controls regardless of the source of funding? Or do the controls for federal-sponsored funding differ from those in place for industry-sponsored awards?

6. The NSF OIG audits of effort reporting at colleges and universities (see ¶3320.5) are routinely concluding that the A-133 audit is not sufficient to satisfy the A-21 requirement of an independent evaluation of the payroll distribution system. What process is your institution using to ensure that this evaluation is being properly done?

7. Properly accounting for American Recovery and Reinvestment Act funds may require certain adjustments to your audit preparation. How is your office responding?
13190.3 **Answer Key**

1. (a) Program-specific audit
2. (b) Location
3. (a) Outside audit firms
4. (d) The cost of the audit
5. (b) Extrapolation
6. (d) Meet with all individuals to be interviewed by the auditors to “coach” them on the appropriate responses.
7. (c) Names of principal investigators and project staff who were interviewed by the auditors
8. (b) They are usually published in the *Federal Register*.
9. (a) The outcome of an audit is heavily dependent on the institution’s preparedness.
PLACE TAB

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Post-Award Administration
Chapter 3300
Post-Award Administration

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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter provides general descriptions of and strategies for managing the post-award functions in a sponsored programs office.

In the usual life cycle of a grant, there is both a “pre-award” and a “post-award” phase. The pre-award phase includes the preparation of the proposal, its submission, any subsequent negotiation of award terms and conditions, acceptance of the award, and initiation of the project. The post-award phase includes everything that happens from the time the award has been initiated until the project has been completed and the award closed out. Jane Youngers of the University of Texas Health Science Center at San Antonio identifies and explicates the full range of post-award functions that are typically required for the administration of sponsored projects, whether funded by grants, contracts, or cooperative agreements.

Youngers has assembled a very complete collection of post-award topics, both financial and nonfinancial. Among the topics that Youngers addresses are award terms and conditions, allowable costs, effort certification, cost transfers, subrecipient monitoring, and award reporting and closeout. For most of these topics, Youngers has included illustrations of institutional policies, procedures, forms, and policy guidelines from leading research universities, both public and private. These illustrations are particularly useful for those charged with the responsibility of reviewing and improving the policies, procedures, and forms at their own institution. As Youngers so clearly points out, post-award administration covers a multitude of issues and topics. Failure to adequately address any of these topics could easily land an institution on the front page of the local newspaper.

Chapter 3300 will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶3305, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶3320), practical tools (at ¶3330), case studies (¶3340), and statistics and survey results (at ¶3360). A “knowledge check” containing Q&As and discussion topics is included at ¶3390.
¶3305 Post-Award Administration

Jane A. Youngers, Assistant Vice President for Research and Sponsored Programs (emeritus)
The University of Texas Health Science Center at San Antonio

The purpose of this chapter is not to visit the specific requirements of each regulation or policy that makes up post-award administration. Rather, the discussion focuses on management for post-award administration. Because the federal government is the primary sponsor of college and university sponsored programs, emphasis is placed on the federal requirements relating to post-award administration. In fact, as one examines the policies and procedures of most institutions, it becomes apparent that most of the systems in place mirror the federal requirements.

This chapter focuses on major institutional systems requirements per se and addresses them in the context of major post-award functions.

¶3305.1 Overview of Post-Award Administration

At its simplest, post-award administration is what happens after the proposal is submitted and the award is made. This area covers a multitude of policy issues and processes both financial and nonfinancial. When an institution receives an award from an external sponsor, it agrees to certain terms and conditions. In addition to conducting the work proposed, the institution also agrees to be a good steward of external funds. The post-award administrative function is in place to ensure good stewardship.

Assistance to Faculty

However, good stewardship is not the only important purpose that the post-award administrative function performs. It should be the mission of any office or unit that provides post-award administration to provide assistance to faculty members as they conduct the funded project and to the department/unit administrators that provide the frontline sponsored programs administrative tasks. That assistance can be provided in many forms — from producing easy to understand periodic reports that allow the investigator to know the ongoing financial status of the project to assisting with the closeout of the award, to providing appropriate information and training to the department/unit administrator, to anything in between.

¶3305.2 Organization and Staffing Considerations

There is no one correct way to organize the post-award functions of project administration. At some institutions, there is a clear delineation of pre-award and post-award activities. Once the proposal is submitted and an award has been made, further administration is turned over to the post-award administration unit or staff. For a majority of institutions, the traditional sponsored programs office handles preaward and post-award nonfinancial matters such as the issuance of subawards and obtaining post-award approval from sponsors, where required. (For a full discussion of pre-award administration, see Chapter 2500.)
Another model that is clearly becoming more popular is the consolidation of the pre- and post-award functions into one sponsored programs office creating, in effect, one-stop shopping. Each institution must decide for itself what works best in its organizational structure and culture. Likewise, the resources required to perform the post-award project administration function are highly dependent on the amount of external funding, the mix of such funding, and the structure of project administration at the particular institution.

Organizational structure is particularly important. The amount and type of centralized support is highly dependent upon the support at the institutional college, departmental, or individual research-unit level. If the institution has strong departmental administration personnel, it is less likely that the post-award office will need to provide extensive day-to-day administration on an individual project level. Likewise, without strong administrative support at the project level, the post-award office will be the office of first resort for investigators. (For an overview of institutional organizational models, see Chapter 300.)

**Staffing Concerns**

The amount of staffing required for the post-award function of sponsored programs administration is a direct result of the organizational structure of the institution. In addition, depending on the functions of the post-award office, staffing may have a direct relationship to the institution’s cash flow position. Because one of the traditional functions of a post-award administration office is cash management, including letter of credit drawdown and billing, having the correct amount of staffing makes a difference in the amount of unreimbursed costs an institution carries. Not to be ignored are the spate of recent audit settlements involving post-award issues and the increasing interest by the federal government, as the primary sponsor at most institutions, in post-award administration requirements such as effort certification, cost transfers, and subrecipient monitoring. These types of activities have caused many institutions to increase their post-award administrative staffing.

While staffing-level metrics have often been attempted, no universal models have been developed. Why? As stated above, organizational structure plays a large role and the precise functions in any one office dictate the staffing levels. While one institution may have three individuals charged with monitoring the financial status of the award and producing financial reports to external sponsors, another may have five individuals who not only perform those tasks but also invoice sponsors. Consequently, it is incumbent upon the institution itself to determine the tasks that need to be performed and the amount of staffing necessary to accomplish those tasks.

**3305.3 Communication Issues**

As with any administrative function of an institution, communication both within the post-award administrative units and to their community — including departmental and project staff, investigators, and the external sponsor — is paramount.

There are many ways communication can be accomplished. At the institutional level, a sponsored programs administration Web site is often used as the format to
post policies, reference grantee requirements, and announce new initiatives. Some institutions have established a listserv for investigators and administrators as an effective way of communicating policies. Others have developed investigator guides. (For a full discussion of communication issues, see Chapter 500.)

It is also important that each individual and institutional office (both centrally and at the department/unit level) understand its specific role and responsibilities in project administration. A sample of an investigator responsibility statement is shown in Figure 1.

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**Figure 1: Sample Investigator’s Responsibilities**

Although University XYZ is legally accountable to the sponsor as the official recipient of a grant or contract, the principal investigator or project director is responsible for the proper fiscal management and conduct of the project. To assist the faculty member in this very important responsibility, the university provides supporting administrative services and has established policies and procedures to help meet both sponsor and university administrative requirements. The university is, ultimately, legally and financially responsible and accountable to the sponsor for the performance of the sponsored activity and the proper use of funds, but without the full cooperation and vigilance of the PI, the university would fail in its stewardship role. In the truest sense, therefore, the sponsored programs process is a joint effort between the PI and the university; both must do their parts well in order to achieve success.

The PI must comply with all the terms and conditions imposed by the sponsor and see that project funds are managed efficiently and effectively within approved budgets. The PI must initiate all required approvals for budgetary and programmatic changes that may be necessary during the project. The PI is likewise responsible for the preparation and timely submission of technical reports and any other required deliverables.

In addition, the PI must ensure that all project members are familiar with and comply with the intellectual property and publication clauses of the grant or contract, with federal policies regarding research safety, protections, and integrity, and with applicable U.S. export control regulations. Inventions and copyrightable material produced under sponsored projects must be governed by the specific terms of the award received from the sponsor and must be handled in accordance with university policy.

Projects are conducted as a function of the appropriate academic unit (department, college, or institute). If the project is over-expended or if auditors disallow an expenditure, the university must ask the appropriate academic unit to cover this cost.

The PI has a responsibility to the sponsor, the department, the college or institute, and the university to ensure that the requirements of the sponsored project are met and the policies of the university are followed. Research policies are found at ______________________.

*Source:* Adapted from Pennsylvania State University materials.
Training and Education

Not to be dismissed are the training and educational opportunities that the post-administration office should afford the sponsored research community. Some institutions have made such training and educational programs mandatory at the investigator and/or department/unit administrator level. At present the federal government has not mandated any administrative training requirements at the post-award level.¹

Many years ago, the Department of Health and Human Services (HHS) Office of Inspector General’s (OIG) “Draft OIG Compliance Program Guidance for Recipients of PHS Research Awards” did suggest that an appropriate compliance program should include “the training of appropriate administrators, both at the institution and department levels, faculty (including principal investigators), other staff, and contractors on award administration and other program requirements.”² The proposed guidance continued: “For example, administrative personnel who manage award funding should receive detailed training on federal cost principles and grant administration regulations and policies.”

Whether mandatory or voluntary, there are many areas of post-award administration that the research administrator may wish to consider offering training in, such as allowable costs, effort certification, and understanding financial ledgers and reports. (For a full discussion of training and education issues, see Chapter 1100.)

Department-Level Training. Often such training and education programs are aimed at the departmental administrator. Many institutions have developed comprehensive training programs for department administrators that range from voluntary to mandatory. Post-award topics as part of such multisession programs include:

- budget and expenditure rules and regulations,
- special considerations for budgeting,
- awards and negotiation,
- project setup,
- changes in awards,
- research salary and personnel issues,
- research accounting roles and responsibilities,
- F&A (facilities and administrative) costs,
- reports, and
- audits.

¹ That is not to say that there are not mandatory training requirements in certain areas such as use of human subjects, animals, and other regulatory arenas.
² 70 Fed. Reg. 71312 (Nov. 28, 2005). Subsequent to publishing the proposed guidance, the HHS OIG announced that it would not be going forward with issuing final guidance. Instead, the OIG recommended that broader, voluntary compliance guidance be developed.
Informal Gatherings. There are opportunities for more informal exchange of information and education as well that either serve to supplement the more formal training programs or simply provide information and exchange. Some sponsored programs offices present a series of brown-bag lunch sessions on the fiscal management of sponsored projects with the sole purpose of providing department staff with more detail, examples, and discussion about the day-to-day fiscal management aspects of sponsored projects. One institution holds financial administrator breakfasts to provide an opportunity for business office managers, department/unit staff, and faculty to discuss current issues in the financial administration of sponsored projects and to interact with post-award administration staff.

§3305.4 Resources

A well-trained staff with well-defined responsibilities for certain functions is paramount to success in post-award administration. Post-award administrators need to have access to current regulations and clearly written and consistently enforceable institutional policies to rely on. If they are charged with financial monitoring and/or reporting, it is critical to have a financial system in place that provides accurate, reliable information that is easily accessed.

Desk References

Important items that the post-award administrator should provide to his or her staff are desk manuals that provide resource information, sample reports, examples, correspondence, etc. and details on the execution of certain procedures. Publications such as this compendium not only serve as useful teaching and reference tools, but also keep the post-award administrator abreast of the latest developments in the post-award arena.

Professional Associations

Organizations such as the National Council of University Research Administrators (NCURA) are invaluable to the post-award administrator. Offering a diverse variety of programs including meetings, video conferences, publications, and the like, NCURA provides the sponsored programs administrator career-long learning opportunities.

Not to be dismissed in any discussion of resources is the value of networking with other administrators in sponsored programs. In fact, other than knowing the fundamentals of sponsored programs administration and having adequate institutional policies, a network of contacts at other institutions is the most valuable tool one can have. Through NCURA’s national and regional programs, such contacts can be initiated and when issues arise, there are others to contact for assistance.

Finally, in the past few years, the Internet has emerged as an invaluable resource to the post-award administrator. Most institutions publish their policies and procedures on the Web and by accessing those, the post-award administrator can locate valuable resource information.
Overview of Post-Award Requirements

The Uniform Guidance, Subpart D establishes the key requirements for post-award administration. Specifically, it sets forth the minimum standards that an organization must meet in order to be a recipient of federal assistance awards. Those requirements are in the areas of

- financial and program management,
- property standards,
- procurement standards,
- performance and financial monitoring and reporting,
- subrecipient monitoring and management,
- record retention and access,
- remedies for noncompliance,
- closeout including post-closeout adjustments and continuing responsibilities, and
- collection of amounts due.

Regulations applicable to contracts are contained in the Federal Acquisition Regulation (the FAR). While the FAR at times is more precise (e.g., in property reporting) or restrictive (e.g., in record retention requirements), it is generally assumed that if an organization meets the requirements of the Uniform Guidance, it will also meet, with exceptions, the requirements of the FAR.

Also included in the Uniform Guidance and absolutely necessary for successful post-award administration at universities are Subpart B, Cost Principles and its annual Compliance Supplement.

The combination of the regulations and policy requirements of these documents form the basis of post-award administrative requirements. (For a full discussion of the Uniform Guidance, see Chapter 1300.)

Institutional Policies and Practices

The manager of the post-award function must have sound institutional policies to rely upon as well as the appropriate means of communication and diligent enforcement of those policies. Success in the post-award area can only come through that combination of critical factors.

It is also important to review established policies and procedures to ascertain whether they are up to date and whether they are being appropriately followed. Of import to note is that various federal audits have found fault with institutions for not following their own published policies.

---

3 The Uniform Guidance can be found at https://www.ecfr.gov/cgi-bin/text idx7tpl=/ecfrbrowse/Title02/2cfr200_main_02.tpl
4 The website for the Federal Acquisition Regulation is http://acquisition.gov/comp/far/index.html.
Key Requirements
There are a multitude of requirements and tasks as part of post-award administration. Rather than attempt to cover the universe, a number of critical tasks are discussed in the following sections with emphasis placed on addressing these issues through sound policies, procedures, and educational initiatives. The topics discussed below are those post-award administrative processes/tasks that are notably significant and, in part, include the following:
◆ Award terms and conditions
◆ Allowable costs
◆ Prior approvals
◆ Effort certification
◆ Equipment
◆ Cost transfers
◆ Program Income
◆ Award reporting and closeout

Research administrators should please note that where examples are provided, these are only examples. They may not meet a particular institution’s needs, and they should not replace or substitute for the exact specifications of various statutes and regulations.

3305.6 Award Terms and Conditions
Post-award administration begins the moment an award is received. The award document must be reviewed to ascertain its terms and conditions, with respect to requirements for both financial management and nonfinancial management. Identifying any special terms and conditions at the outset and communicating those requirements is critical to assure appropriate management of the award.

Internal Notification of Award
The post-award administrator must make certain that each individual or unit involved in post-award administration understands the award terms and conditions. Some institutions accomplish this by the production of an internal notice of award that not only sets forth key information about the award, but also provides the investigator and his or her administrative unit guidance on items such as required prior approvals, award restrictions, and reporting. A sample internal notice of grant award is included as Figure 2.

Communication about invoicing and payment steps is necessary. All parties should also understand how payment will be made and, if required, who is responsible for invoicing the sponsor. For most awards billing and payment requirements
are addressed centrally; however, there may be some awards where payment is based on project milestones or more detail is required on an invoice than is provided centrally.

**Figure 2: Sample Internal Notice of Grant Award**

<table>
<thead>
<tr>
<th>Account No.:</th>
<th>PI Department:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Principal Investigator:</td>
<td>Sponsor Award Number:</td>
</tr>
<tr>
<td></td>
<td>Sponsor:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Project Title:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose: (e.g., research, instruction, etc.)</td>
</tr>
<tr>
<td>Effort Certification Required?:</td>
</tr>
<tr>
<td>Project Location:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start Date:</th>
<th>End Date:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Budget Category</th>
<th>Amount This Action</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salaries</td>
<td>$ xxx</td>
<td>$ xxx</td>
</tr>
<tr>
<td>Benefits</td>
<td>$ xxx</td>
<td>$ xxx</td>
</tr>
<tr>
<td>Supplies</td>
<td>$ xxx</td>
<td>$ xxx</td>
</tr>
<tr>
<td>F&amp;A Costs</td>
<td>$ xxx</td>
<td>$ xxx</td>
</tr>
<tr>
<td>Total</td>
<td>$ xxx</td>
<td>$ xxx</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Certifications:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type: (e.g., animal use, human subjects etc.)</td>
</tr>
<tr>
<td>Approval Status:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>F&amp;A Recovery:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate Type: (e.g., on/off campus)</td>
</tr>
<tr>
<td>F&amp;A Base: (e.g., MTDC, S&amp;W, etc.)</td>
</tr>
<tr>
<td>F&amp;A Rate:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Investigator Effort Commitments</th>
<th>Role</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(name)</td>
<td>(e.g., PI)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transaction Approval Authority</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>(name)</td>
<td>(e.g., PI or Administrator)</td>
</tr>
</tbody>
</table>

**Remarks:**

Example: Award not made under expanded authorities; agency approval is required for carryforward of balances into continuing year; rebudgeting in excess of 25% of total award; all foreign travel; any subawards. Progress reports are due annually, 60 days prior to end of period. No human subjects may be used until IRB approval is submitted to agency. Any publications should include the following notice: “__________.”

**Accounting Instruction:**

Example: Accounting to send invoice quarterly [agency, agency address]. Final invoice is due within 90 days of the end of the project period.

**OSP Contact:** (name)

<table>
<thead>
<tr>
<th>Phone:</th>
<th>Fax:</th>
<th>OSP Authorization:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Distribution:</th>
<th>OSP File</th>
<th>PI</th>
<th>Accounting</th>
<th>Department Administrator</th>
</tr>
</thead>
</table>

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**Award Modifications**

It is also important that any award modifications be processed in a timely fashion and that the terms of the modification are communicated appropriately to the investigator and department/unit administrator. With most grants, such as those single project awards from the National Institutes of Health (NIH) and the National Science Foundation (NSF) where a new account number is not always necessary, many institutions automatically extend the award into the next budget period to allow for continued payroll, etc.

Whether or not to maintain the same account number for the continuation of a project is a procedural question that the post-award administrator must address. Here is one area where the post-award administration policies can assist the investigator and department/unit administrator. In most financial systems, payroll would not need to be redone if the account number stays the same across all years of the project or a project period.

- Many institutions look at the award terms and conditions to assist them in developing their internal practices in this area. Determining criteria often used in developing practices include the following:
  - Is the award a renewal (a new project period) or simply a continuation of an existing award?
  - Can unobligated balances be automatically carried forward or is permission required from the agency with carry-forward balances restricted until such approval is granted?
  - Are annual financial reports required?

For example, the NIH makes research project awards (commonly called R01s) for a fixed number of years known as the project period. Using the above as criteria, because a financial report is only needed at the end of the project period most institutions would only establish one account that carries through each of the years of the entire project period. When the award is renewed through a competitive submission, most institutions would then establish another account for the next project period. Where financial reports are required on an annual basis or where approval is needed to carry forward balances into the next year, most institutions establish a separate account for each year.

### 3305.7 Allowable Costs

Assuring that only allowable costs are charged to sponsored programs accounts is paramount to the post-award function. This is an area where a strong institutional policy and the development of criteria for allowability consistent with the requirements of Subpart E of the Uniform Guidance is crucial. Determinations about the appropriateness of costs are typically first made at the investigator or department level. The post-award administrator should also accept that one of his or her primary roles is to support the department/unit administrator in making costing decisions and to provide resources and documentation of cost policies to that administrator. Consequently the post-award administrator should consider developing a matrix of allowable costs citing examples and exceptions.
One such matrix is included as Figure 3. A flowchart for determining allowability of costs can also be a useful educational tool; a sample is included as Figure 4 (on page 3305:13).

Finally, any discussion of allowability should include how costs are properly allocated to a project. One way of doing this might be to provide statements documenting a cost to a project. For example, some institutions require certain specific statements of allocability on reimbursement vouchers such as “this cost is made in support of the objectives of the project.” It would also be useful to develop cost allocation guidance as part of an allowable cost policy such as the example included as Figure 5).

**Figure 3: Sample Direct Cost Guidelines**

The federal government is the largest sponsor of research and other scholarly activities at University XYZ. For that reason, the cost policies of the federal government, contained in the Uniform Guidance, 2 CFR Part E, set the standard for all sponsored activities.

For a cost to be allowable and chargeable to a sponsored program, it must meet the following tests:

◆ Reasonable (Would a prudent person incur this expense?),
◆ Allocable (Is the expense beneficial to the project?), and
◆ Consistent with institutional costing practices (Is the expense treated the same way regardless of source of funds?)

If the sponsored agreement specifically states that the expense is unallowable, it cannot be charged to the project irrespective of its appropriateness to the project.

The table below provides information regarding the allowability of some of the most common items of costs charged as direct. In the case of an inconsistency between the provisions of a specific agreement and the provisions below, the provisions of the specific agreement should govern. It is also recognized that University XYZ enters into agreements with private sponsors who have no specific rules regarding costing policies. If those agreements are not for research projects but are for other activities, certain exceptions to the following guidelines may be made.

<table>
<thead>
<tr>
<th>Direct Cost</th>
<th>Normal Treatment</th>
</tr>
</thead>
</table>
| Salaries, Wages, and Benefits | Costs of personnel are allowable on sponsored agreements to the extent supported by actual effort performed on the project and approved in the award budget. An individual’s base salary must be used to compute the cost charged to a sponsored agreement; extra compensation or supplemental pay for work on sponsored programs is unallowable except in extraordinary circumstances. Administrative and clerical costs are generally recovered through indirect costs and not charged directly to the project. To be charged as a direct cost the following conditions must be met:  
  • Administrative or clerical salaries are integral to a project or activity;  
  • Individuals involved can be specifically identified with the project or activity;  
  • The costs are explicitly included in the budget or have the prior written approval of the awarding agency  
The institution has established XX% as the minimum level of effort for administrative and clerical personnel to be included in the project budget. |
| Faculty                       |                                                                                                                                                  |
| Postdoctoral fellows          |                                                                                                                                                  |
| Graduate students             |                                                                                                                                                  |
| Undergraduate students        |                                                                                                                                                  |
| Technical personnel           |                                                                                                                                                  |
| Administrative and clerical staff |                                                                                                                                               |
**Figure 3: Sample Direct Cost Guidelines** (continued)

<table>
<thead>
<tr>
<th>Direct Cost</th>
<th>Normal Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Meals and Meeting Costs</td>
<td>Only when specifically permitted by the sponsored agreement or is an integral part of the sponsored project—for example, meeting costs associated with project advisory groups.</td>
</tr>
<tr>
<td>Donations and Contributions</td>
<td>Unallowable.</td>
</tr>
<tr>
<td>Entertainment Costs</td>
<td>Unallowable unless specifically approved.</td>
</tr>
</tbody>
</table>
| Equipment                                 | Scientific or Special Purpose Equipment: allowable when the equipment is necessary and will be used primarily, or exclusively, for the project(s) to which the costs will be charged.  
   General Purpose Equipment such as office equipment: unallowable without the prior written approval of the awarding agency.  
   Note that the University’s equipment definition is an acquisition cost of $____ and a useful service life of ___ year or more. Software and computers that do meet the definition are considered supplies. |
| Internet Costs                            | Costs of internet connections from a person’s home are generally unallowable.                                                                                                                                                                                                     |
| Local Telephone (including monthly instrument charges) | Local telephone costs are generally unallowable as a direct cost. However, there are certain circumstances where these charges may be directly charged to a research project such as instances where participants are required to call into a specific telephone line. |
| Long Distance Telephone                   | Allowable when specifically identified with a specific project.                                                                                                                                                                                                                  |
| Materials (supplies, purchased materials, etc.) | Project supplies: Items such as chemicals, laboratory supplies, and even pens, pencils, folders, notebooks, and the like that can be identified as being “exclusively for the support of” a sponsored program are allowable.  
   Office supplies: Items commonly found in any office such as wall clocks, calendars, waste cans, letterhead, staplers, etc. that would likely be used for purposes other than the award are unallowable except in special circumstances.  
   Computing equipment and software: These are allowable costs if they do not meet the Institution’s definition of equipment (see above). |
| Memberships (scientific or professional societies) | Unallowable unless specifically approved by the sponsor.                                                                                                                                                                                                                       |
| Postage                                   | Routine postage charges: unallowable except where a project requires specifically identifiable large mailings or the like.  
   Special mailing or delivery charges: Allowable when necessary for the success or completion of a project (example: overnight delivery charges for shipment of perishable research materials to collaborators or from suppliers) |
<p>| Pre-Agreement Costs                       | Unallowable unless approved under the provisions of the specific funding agency.                                                                                                                                                                                                 |</p>
<table>
<thead>
<tr>
<th>Direct Cost</th>
<th>Normal Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Services</td>
<td>Consultant fees are an allowable charge to sponsored agreements. Sponsor guidelines should be checked. “Honorariums” are typically not allowed; rather they should be payments to consultants for services received.</td>
</tr>
<tr>
<td>Publications (books, sub-</td>
<td>Unallowable unless approved by the funding agency or essential to the daily conduct of the project and not readily available from other sources such as the internet or the library.</td>
</tr>
<tr>
<td>subscriptions)</td>
<td></td>
</tr>
<tr>
<td>Scholarships and Student Aid</td>
<td>Unallowable to research projects.</td>
</tr>
<tr>
<td>Travel Costs</td>
<td>Allowable if specifically benefitting the project; with few exceptions, airfare cost should not be in excess of the basic least expensive unrestrictive fare. Institutional policies must be followed.</td>
</tr>
<tr>
<td></td>
<td>Foreign travel (using federal funds): U.S. flag carrier or Open Skies requirements apply such travel may require specific agency approval. Sponsor regulations should be consulted.</td>
</tr>
<tr>
<td>Visa Costs</td>
<td>Visa expenses incurred on behalf of project personnel are allowable consistent with the person’s payroll appointment to the project. Expedited fees are not allowable.</td>
</tr>
</tbody>
</table>
Figure 4: Sample Guidance for Budgeting and Charging Direct Costs on Sponsored Projects

Is the Cost...

- Reasonable? → No
- Allocable? → No
- Consistent With Institutional Practice? → No
- Allowable? → No → Not an Appropriate Direct Charge on Sponsored Projects
- Are Sponsored Funds Available? → No → Cost Sharing
- Direct Charge to Sponsored Projects

Source: Adapted from Vanderbilt University materials.
Figure 5: Sample Policy on Allowable Costs

Uniform Guidance, Subpart E

The Uniform Guidance Subpart E, Cost Principles, establishes the principles for determining costs applicable to agreements with educational institutions. For a cost to be allowable it must be

- **Reasonable**
  A prudent person would have purchased this item and paid this price

- **Allocable**
  Expenses can be allocated to the federally funded activity based on the benefit derived, cause and effect, or other equitable relationship

- **Consistently Treated**
  Like expenses must be treated the same in like circumstances.

- **Allowable**
  Permitted as a direct cost under the specific grant or contract.

*Reasonable:*

A cost may be considered reasonable if the nature of the goods or services, and the price paid for the goods or services, reflects the action that a prudent person would have taken given the prevailing circumstances at the time the decision to incur the cost was made.

To determine if an expenditure is reasonable, ask yourself the following questions:

1. Is the cost a type generally recognized as necessary for the operation of the institution or the performance of the sponsored agreement?
2. Does incurring this expenditure violate any requirements or policies such as institutional policy, federal and state laws and regulations, and sponsored terms and conditions?
3. Have the individuals incurring this cost acted with due prudence (discretion and good sense) under the circumstances? Have they considered their responsibilities to the institution and the sponsor?
4. Were the actions that were taken with respect to incurring the cost consistent with established institutional policies and practices applicable to the work of the institution, including sponsored agreements?

*Allocable:*

A cost is allocable to a particular agreement if the goods or services involved can be directly assigned to that agreement.

To determine if an expenditure is allocable, ask yourself the following questions:

1. Is it incurred solely to advance the work under the sponsored agreement?
2. Does it benefit both the sponsored agreement and other projects in proportions that can be approximated through the use of reasonable methods?
3. Is it necessary for the overall operations of the institution and, in light of sponsored agreement rules and regulations, is it deemed to be assignable in part to the sponsored project?
Expense Allocation Policies

If an expenditure solely benefits one project, it should be charged directly to that project. However, sometimes an expenditure can benefit two or more projects. Lab chemicals are an example of an expense that could potentially benefit more than one project. When this occurs the expenditure must be charged in the same proportions as the benefits on the respective projects. Two methods can be used for allocating an allowable direct cost to two or more awards:

**The Proportional Benefit Rule**
The proportional benefit rule applies when it is possible to determine the proportional benefit of the cost to each project. The cost is allocated according to the proportion of benefit provided to each of the projects.

**The Interrelationship Rule**
The interrelationship rule applies when it is not possible to determine the proportional benefit to each project because of the interrelationship of the work involved. The cost is distributed on any reasonable and rational basis because the proportional benefit cannot be identified and applied to the individual projects.

Following are examples of allocation methodologies:

- **Allocation based upon usage**: The cost of lab supplies allocated based upon the quantity used on each project.
- **Allocation based upon number of experiments**: The cost of syringes allocated based upon the number of experiments performed for each project.
- **Allocation based upon number of hours**: The cost of computer equipment allocated based upon the number of hours logged on for each project.
- **Allocation based upon the number of clients served**: The cost of personality tests allocated based upon the number of clients served.
- **Allocation based upon effort**: The cost of lab supplies proportionally allocated based upon the PI’s percentage of effort charged to each project.

**Consistently Treated:**
All costs incurred for the same purpose in like circumstances must be treated uniformly either as direct costs or as facilities and administrative costs. Since certain costs such as administrative and clerical staff salaries and office supplies are normally treated as F&A costs, these costs cannot be charged directly to federal agreements unless the circumstances related to a particular project are clearly different from the normal operations of the institution.

**Allowable:**
Costs expressly unallowable or mutually agreed to be unallowable shall be identified and excluded from any billing, claim, application, or proposal related to a sponsored research project.

Sponsoring agencies use the term “allowable” to mean permitted as a direct cost under the terms of a specific grant or contract. Expenditures that are generally allowable for federal reimbursement may not necessarily be permitted under the terms of a specific grant or contract.

**Source:** Adapted from the University of Washington materials.
Administrative and Clerical Salaries

A challenging area in allowable costing is the requirements of the Uniform Guidance concerning administrative and clerical salaries. Part 200.413 states, in part, “The salaries of administrative and clerical staff should normally be treated as indirect (F&A) costs. Direct charging of these costs may be appropriate only if all of the following conditions are met:

1) Administrative or clerical services are integral to a project or activity;
2) Individuals involved can be specifically identified with the project or activity;
3) Such costs are explicitly included in the budget or have the prior written approval of the Federal awarding agency; and
4) The costs are also not recovered as indirect costs.

There are many schools of thought regarding compliance in this area. At some institutions, there are very stringent requirements that must be met prior to putting administrative or clerical salaries on a sponsored project. At others, the requirements are not so stringent. Clearly, though, one of the purposes of the restrictive language is to stop the practice of clerical support at low percentages being charged to the so-called “single-investigator laboratory bench” project.

One relatively successful approach has been to stipulate a minimum percent effort that must be met before administrative or clerical salaries can be charged — this minimum percentage varies from 10 to 20 percent. This is also an area where periodic monitoring of salaries charged to projects can keep the research administrator informed as to what is happening at the institution.

13305.8 Prior Approvals

Regardless of which central office assists in obtaining any required prior approvals necessary for project or budgetary changes, investigators and their administrators should be aware of when such prior approvals are required and whether they can be granted institutionally or whether agency approval is required. Again, many institutions have developed matrices of such prior approval requirements that are either posted to their Web sites or available by another means to investigators and their administrative units. A sample prior-approval matrix that illustrates prior-approval authorities is included as Figure 6.

It should also be noted that the research agencies typically apply the government’s Research Terms and Conditions to research awards as well as adapting the regulations to meet their own criteria in areas such as prior approvals. That is why it is important to understand the terms and conditions of the specific award in question and to make reference to any further award conditions. The Research Terms and Conditions and the agency implementations can be found at https://nsf.gov/awards/managing/rtc.jsp
### Figure 6: Sample Prior-Approval Matrix

<table>
<thead>
<tr>
<th>Prior approval is required for</th>
<th>How approval is obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in scope</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Changes in status of key personnel (Withdrawal from the project; absence for any continuous period of 3 months or more; reduction of time devoted to project by 25% or more from level in approved application)</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Change of grantee organization</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Carryover of unobligated balances</td>
<td>Under expanded authorities; institution can approve</td>
</tr>
<tr>
<td>Deviation from award terms and conditions</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Foreign component added to a grant to a domestic organization</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Need for additional funding</td>
<td>Written request to awarding agency, including extension of a final budget period of a project period with additional funds</td>
</tr>
<tr>
<td>Pre-award costs (More than 90 days before effective date of the initial budget period of a new or competing continuation award, at grantee’s own risk)</td>
<td>Under expanded authorities; institution can approve</td>
</tr>
<tr>
<td>No-cost extension of up to 12 months</td>
<td>Under expanded authorities; institution can approve; second no-cost extensions require awarding agency approval</td>
</tr>
<tr>
<td>Transfer of funds between construction and nonconstruction work</td>
<td>Written request to awarding agency</td>
</tr>
<tr>
<td>Transferring amounts from trainee costs</td>
<td>Written request to awarding agency</td>
</tr>
</tbody>
</table>
Institutions of higher education are required to comply with the Office of Management and Budget’s (OMB) “2 CFR 200: Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards” referred to as “Uniform Guidance” as well as agency specific policies and guidelines to support the charging of personal services to federal awards. Institutions were previously subject to the cost principles under OMB A-21, J.10 which provided prescriptive examples to support personal services (i.e. salary and wages) charged to federal awards.

Uniform Guidance addressed this with significant changes to the institutional requirements for supporting salary and wages charged to federal awards. Section 200.430 removed the prescriptive examples found in A-21 and includes guidance on the types of compensation that are allowable to charge directly to federal awards as well as the documentation standards for supporting these charges. With this flexibility, Uniform Guidance requires greater accountability of institutions through strong internal controls. Institutions now have the flexibility to retain their current effort reporting systems or they may choose to move to another system (such as a project based verification system) provided they meet the documentation standards below.

The standards for documentation of personal expenses must be based on records that accurately reflect the work performed. These records must:

- Be supported by a system of internal controls which provides reasonable assurance that charges are accurate, allowable, and properly allocated.
- Be incorporated into the official records of the institution.
- Reasonably reflect the total activity for which the employee is compensated by the institutions, not exceeding 100% of compensated activities as defined by the institutions definition of Institutional Base Salary (IBS).
- Encompass both federal and other activities compensated by the institution on an integrated basis, but may include the use of subsidiary records as defined by the institutions written policy.
- Comply with the institutions established accounting policies and practices for treatment of incidental work.
- Support the distribution of the employee’s salary or wages among specific activities or cost objectives if the employee works on more than one federal award; a federal award and non-federal award; an indirect activity and a direct cost activity, two or more indirect activities which are allocated using different allocation bases; or an unallowable activity and a direct or indirect cost activity.
- Budget estimates (i.e. estimates determined before the services are performed) alone do not qualify as support for charges to federal awards, but may be used for interim accounting purposes, provided that:
  - The system for establishing the estimates produces reasonable approximations of the activity performed.

\(^5\) This section was written and reviewed by Jerry Fife and Mary Beth Rudofski of the Point Consulting Group
Significant changes in the corresponding work activity (as defined by the institutions policies) are identified and entered into the records in a timely manner. Short term (such as one or two months) fluctuations between workload categories need not be considered if the distribution of salaries and wages is reasonable over the longer term.

The institutions system of internal controls includes processes to review after-the-fact interim charges made to federal awards based on budget estimates. All necessary adjustment must be made such that the final amount charge to the federal award is accurate, allowable and properly allocated.

Because practices vary as to the activity constituting a full workload (IBS) records may reflect categories of activities expressed as a percentage distribution of total activities.

It is recognized that teaching, research, service, and administration are often inextricably intermingled in an academic setting. When recording salaries and wages charged to federal awards, a precise assessment of factors that contribute to costs is therefore not always feasible, nor is it expected.

**3305.10 Equipment**

Under the guidance provided by OMB Circular A-110, institutions are allowed to set the “capitalization level” of equipment at any amount up to $5,000, with the other determinant being that the equipment must have a useful service life of one year or more. For institutions with modified total direct cost (MTDC) facilities and administrative (F&A) rates, it is important that, whatever the capitalization level, the post-award administration office recognize that these costs will be exempt from F&A charges. Often institutions create specific budget subcodes that apply to capitalized equipment and, through their accounting systems, are able to automatically exclude these costs from F&A calculations.

**Budget Deviations**

There are two areas relating to equipment that deserve particular attention from the post-award administrator. First, investigators and department/unit administrators need to recognize the effect of budget deviations on F&A assessment. If equipment is budgeted but supplies are purchased instead, it must be understood that the supplies category is subject to F&A charges such that each freed-up dollar will be available at a lesser amount once the F&A calculation is made (see example below).

**Example**

If equipment costing $10,000 is not purchased and an institution’s F&A rate is 50% MTDC, the amount of direct costs available for expenditure is not $10,000, but rather $6,667 with the remainder necessary for reimbursement of F&A costs. Obviously, if the reverse happens — equipment is not anticipated but is purchased — there will be F&A costs freed up for direct cost expenditure in the same ratio.
Fabricated Equipment
The second area that requires close attention from the post-award administrator concerns fabricated equipment. Because equipment is not always available off the shelf in the configuration necessary for research, investigators often make it themselves using various components. It would not be unusual for the fabricated piece of equipment to reach the capitalization rate and be exempt from F&A calculations. Institutions should have a policy that addresses equipment capitalization so there is no question as to when and how these instances of fabrication are addressed. A sample fabricated equipment policy is included as Figure 7.

13305.11 Cost Transfers
The transfer of costs either into or out of a sponsored programs account is often the subject of federal audit scrutiny and is an area needing particular attention from the post-award administrator. An enforced institutional policy should be in place and a procedure for approval of cost transfers should be widely disseminated.

Approvals
Another essential element that the post-award administration manager should consider is the approval process for cost transfers. For many institutions, late transfers (more than 90 days late) require additional approvals and place more stringent

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Figure 7: Sample Fabricated Equipment Policy
(assumes $5,000 capitalization level)

Definition and Policy Statement. Fabricated equipment is defined as an item of equipment that is built or assembled from individual parts by an investigator and/or other sponsored project personnel, an internal shop, or an external shop. When a completed item of fabricated equipment has an aggregate cost of $5,000 or more and when that item will be recorded as capital equipment in XYZ University’s property management system, the individual component costs associated with the equipment fabrication (regardless of the individual amounts) will not be assessed the facilities and administrative (F&A) cost rate. This policy became effective __________.

Guidelines for Determining Applicability of Policy. The following guidelines apply in determining whether a given instance constitutes fabrication:

- This policy is intended for instances of original fabrication. Any subsequent modifications to the equipment or replacement of individual parts after the original fabrication do not qualify for F&A rate exemption under this policy, unless the subsequent modification/replacement itself costs $5,000 or more and extends the useful life of the equipment.
- There should be a 1:1 correlation between a single fabrication and a single sponsored project. Only in rare circumstances, and with explicit disclosure to and approval by the sponsors, will the costs of a single fabrication be permitted to be charged to more than one sponsored project.
- An original fabrication is expected to be started and completed within a single project period.
- Except in extremely rare circumstances, the individual items that comprise the fabrication are
expected to be in the same physical space (i.e., one room).

- The F&A rate exemption on fabrication costs applies only in instances where ownership of the completed item rests with XYZ University. If the sponsor will retain ownership (title), the exemption does not apply.
- The applicability of this policy is intended for instances where a single piece of equipment is created through extensive construction or assemblage, often involving shop services. An instance where components are simply connected together in a system, such as when individual computers and servers are joined to create a network, does not constitute a fabrication.

**Procedures.** Fabricated equipment should be identified prior to the acquisition of component parts of services related to the fabrication. This identification can initially be made in the sponsored project proposal budget or later using the ________ form. In addition to identifying the fabrication in the proposal budget or the ________ form, the Fabricated Equipment Form must be completed to provide specific information necessary to ensure that the circumstances constitute a fabrication and later to track the fabricated item. The Fabricated Equipment Form can be obtained at [list Web site or office location here].

Costs that should be budgeted and charged to a sponsored account include materials and supplies necessary for the fabrication, as well as any internal or external shop service fees. Although project personnel may participate in the fabrication, their salaries will not be exempt from the F&A rate assessment. Only labor costs that are implicit in the internal or external shop rates will be F&A exempt. Labor, travel, and other costs associated with the services of an outside party in a fabrication should be incorporated in the external shop service fees.

Acquisitions related to the (F&A-exempt) fabrication should be charged to the following budget subcode: xxx. Costs charged to budget subcode xxx will not be assessed the F&A rate.

Once the XYZ Office of Sponsored Programs (OSP) and the XYZ Property Office have reviewed and approved the use of budget subcode xxx for a fabrication, OSP will open budget subcode xxx on the sponsored project account. This budget subcode is to be used solely for the purpose of accumulating the individual charges associated with this fabricated equipment, regardless of the individual amounts. Most individual charges will be in amounts less than $5,000, but where an individual item in a fabrication costs $5,000 or more, that charge should be recorded against budget subcode xxx, not the usual equipment budget subcode. Once budget subcode xxx is opened on an account, it is only to be used for the specific fabrication project for which it was approved. No other project expenses should be recorded against budget subcode xxx.

At the same time budget subcode xxx is created, the Property Office will assign an inventory tag number and will provide the number to the principal investigator. This number should be referenced in all acquisitions made for the fabrication. When the fabrication is completed, the principal investigator should alert the Property Office and OSP. The OSP will initiate an accounting entry to transfer the individual costs to the normal capital equipment budget subcode. The Property Office will tag the fabricated item and record it in XYZ University’s property system.

**When the F&A Rate Exemption Does Not Apply.** If a fabricated equipment item will have an aggregate cost of less than $5,000, the individual costs for all acquisitions made for the fabrication should be budgeted and charged to the normally used supplies and other budget subcodes. These budget subcodes will be assessed F&A. Budget subcode xxx should not be used. In this case, an inventory tag number will not be assigned as the fabricated item does not meet the capitalization requirements.
criteria for the allowability of transfers. For others, early transfers are almost pro forma when their financial systems do not allow multiple accounts to be charged for one purchase and allocation must be made across two or more accounts.

**Payroll Transfers**

Payroll transfers can be particularly problematic especially when such a transfer is made after the payroll or effort certification for the period in question has already been made. At some institutions, transfers of payroll costs to federal awards are not allowable. Others allow such transfers if they are adequately justified and if the effort certification is revised and signed by the employee whose payroll costs are being transferred.

**Institutional Policies**

It is important that the institutional policy address the timeliness of cost transfers as well as the reasons for the transfer. Again having a policy and ensuring that it is adequately understood by the campus research community is key. A sample cost transfer policy is included as Figure 8. A sample cost transfer explanation and justification form is included as Figure 9 (on page 3305:25).

One useful mechanism a post-award manager can use that will limit the amount of cost transfers is to establish accounts prior to the receipt of awards. Typically these accounts are established so that payroll appointments can be made or equipment with long lead delivery times can be ordered. Advance accounts also allow the institution to take advantage of any prior-approval authorities they may have. A policy should be established that defines the terms of such advance accounts; typically, in order to establish such an advance account, the institution requires that the department take responsibility for costs should the anticipated agreement not materialize.

“Pre-award,” “at risk,” or “advance spending” accounts generally are authorized when the anticipated award is a standard grant from a known federal agency. There is always some risk, however. Further, if the institution needs to negotiate terms, it might be in a weakened position if some of the money has already been

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Source: Adapted from a Northwestern University policy.
To comply with the cost allowability and allocability requirements of Uniform Guidance Subpart E, it is necessary to explain and justify transfers of charges into federal awards from other federal accounts, nonfederal accounts, or institutional accounts that may be involved with cost sharing requirements.

In some instances, a cost transfer is unavoidable. This policy and accompanying guidance sets forth the procedures and approvals necessary for a cost transfer.

When the need for a cost transfer arises, the Cost Transfer Explanation and Justification Request (the Request) must be completed and signed. The explanation for the cost transfer must be clearly stated and must be sufficient for an independent reviewer (i.e., a federal auditor) to understand the transfer and conclude that it is appropriate. According to federal regulations, “An explanation which merely states that the transfer was made ‘to correct an error’ or ‘to transfer to correct project’ is not sufficient.” Consequently, the Request may be returned to the administrative unit without approval because of insufficient explanation.

Cost transfers should be accomplished within 90 days of when the original charge was made. The 90-day time limitation applies when transferring expenses to a sponsored agreement. No time limit exists for removing expenditures from a federally sponsored agreement. If inappropriate expenditures are discovered on federal projects, they must be removed without regard to time limits.

Cost transfers that involve payroll charges require special treatment. If such a transfer is made after effort certification for the period in question has been accomplished, a revised effort certification form must be completed and signed by the affected employee.

Cost transfers made solely for the purpose of spending down the project funds are not allowable.

**Documentation Guidance**

Listed below are several examples of cost transfer documentation that do not meet the requirements described above, a description of the improvements needed in the documentation, and a suggestion as to how the description could be improved to meet the requirements.

1. **Questionable explanation:** Transfer of supplies that were charged to the department in error.
   
   **Issue:** This explanation does not adequately explain why the wrong account was charged and why/how the charge is appropriate to the account being debited, nor does it describe how the error occurred. The explanation should be expanded to better describe the reason why the account being charged is appropriate and how the amount being transferred was determined.
   
   **Acceptable explanation:** The supplies being transferred were purchased using a procurement card (p-card). The administrative assistant did not review the p-card transactions by the deadline, causing the transactions to be expensed to the department account. Going forward, the administrative assistant will review all p-card purchases and assign the correct account number, if applicable, to be charged prior to the deadline.

2. **Questionable explanation:** Transfer of overage to related project.
   
   **Acceptable explanation:** The supplies to be transferred are used on related projects. Supplies should be shared equally on both projects; thus 50% of the cost of these items is being transferred.

3. **Questionable explanation:** To correct account incorrectly charged due to clerical error.
   
   **Issue:** Insufficient explanation of why and how the clerical error occurred and why the error was not corrected earlier. In general this explanation is only adequate if a transposition error occurred and such circumstances should be included in the description.
Acceptable explanation: The research assistant in the lab who ordered the supplies used an account number of a project that was terminated. He has been instructed to use the new account number. In the future, all supply orders will be reviewed and approved by an appropriate department administrator prior to submission of the order so that such errors can be prevented.

4. Questionable explanation: Payroll appointment form was not processed in time.

Issue: The explanation does not adequately address why the payroll appointment was not processed in time. The description should be expanded to better explain the circumstances of the delay in processing the appointment and the specific plan to avoid such occurrences in the future.

Acceptable explanation: The administrator was informed of a faculty member’s effort distribution change after the deadline for payroll appointments for the January payroll. The faculty member has been requested to communicate changes in effort in a timelier manner in the future in order to avoid such circumstances.

5. Questionable explanation: To charge a portion of the lab technician’s salary to the project.

Issue: The reason for the transfer is missing and there is no indication of why the payroll appointment was incorrectly made at the time the charge was generated. The description should be expanded to include a description of the individual’s role on the project, the portion of salary being moved, and how the portion of the salary was determined.

Acceptable explanation: Transfer 50% of the lab technician’s salary to Dr. Smith’s project. This individual performed experiments with mice and split his time equally between Dr. Smith’s NIH project and his NSF project. We have talked with the lab technician and Dr. Smith to ensure that more information about the projects is shared in the future, which will better ensure that no such errors will occur in the future.

6. Questionable explanation: Move charge from department.

Issue: The reason for the transfer is not stated. The description should be expanded to explain how the charge benefits the grant being charged and why the charge was not originally posted to the grant.

Acceptable explanation: The start date of the grant was December 1. However, the account number was not established in the accounting system until January 15. The PI needed to purchase some materials to begin work on the project in December, thus the costs for the materials were charged to the department until the account was established. In the future, we will request an advance account for such charges.

7. Questionable explanation: To charge 10.58% of Dr. Wilson’s salary to the research grant and close the account.

Issue: Actual effort is to be estimated as closely as is reasonably possible. The use of very precise estimations is only allowable to the extent that the individual’s effort can be confirmed with such precision. Increasing payroll for the sole purpose of expending project funds is not an appropriate or allowable use of sponsored project funds.

Acceptable explanation: Dr. Wilson worked 10% of her time in January on the grant project. The payroll transfer is being made to reflect this effort.

Source: Adapted from Vanderbilt University materials.
spent. However, if institutions are judicious about establishing advance accounts, the risk is minimal.

### 3305.12 Application of F&A Costs

Institutional F&A rates may not always be allowable on particular sponsored programs awards or, if they are allowable, may not be allowable at the federally negotiated rates. Consequently it is important that institutional systems either allow for such variations or that the post-award administration office be able to appropriately levy the allowable rates. One area that is sometimes difficult for the post-award administrator is the determination of on-campus and off-campus rate applicability. While most often determined at the time of proposal submission, it is important that the on-campus and off-campus rates be well defined so that the appropriate rates are being used on sponsored projects.
In most cases, the definition of on- and off-campus rates is contained in the F&A cost negotiation agreement signed by the cognizant audit agency and the institution. Often, “off campus” is defined as applicable when more than 50 percent of the project takes place in facilities or locations that are not owned or leased by the institution. Some institutions further define the off-campus rate as applicable when the project location is a certain distance (such as more than 50 miles) from campus. The negotiation agreement should be the guide.

**13305.13 Cost Sharing**

Along with effort certification, concern about compliance with cost sharing requirements and commitments has also reached epic proportions in the sponsored research community. Cost sharing compliance has become more visible because of its intersection with faculty effort commitment versus payroll area.

Institutions have also become more sensitive to the amount of cost sharing commitments made. Why? Cost sharing has an impact on an institution’s F&A rate, as any cost sharing provided as a part of an organized research project must be included in the institution’s modified total direct cost (MTDC) base. Any increase in the MTDC base will deflate the F&A rate.

**Documentation**

Documentation of cost sharing can be very challenging to the post-award administrator. There are a number of ways that this task can be accomplished. At some institutions, companion accounts paralleling the sponsored project account are established and cost sharing expenses are recorded in the companion account. Other institutions have separate budget or expense codes in the federal project account that record the cost sharing. For those institutions where neither of the above options is feasible, memorandum records are established and kept with the project file.

Regardless of how documentation is provided, it is important to track cost sharing beyond just the project level because the institution needs to track it in the entirety in order to properly include it in the F&A MTDC base.

**13305.14 Program Income**

Program income is defined in the Uniform Guidance as “gross income earned by the recipient that is directly generated by a supported activity or earned as a result of a Federal award.” Program income can come in many forms including fees for services performed, sale of research materials such as animal models or reagents, and fees from participants at conferences or symposia. For research projects, program income is additive to the project, but it can also be deductive or used as cost sharing. At most institutions, a separate account is set up to handle any anticipated program income. This is an area where it is also appropriate to establish institutional procedural and other guidance. An example of such is included as Figure 10.
\[\textbf{\textnumero 3305.15 Subrecipient Payments and Monitoring}\]

Overseeing the administration of subrecipient agreements and the ensuing monitoring requirements imposed by Uniform Guidance is a challenge to most post-award administrative offices. (For a full discussion of administering subawards, see Chapter 3700.)

\textbf{Invoicing}

The invoicing requirements for subawardees should be clearly outlined in the subaward document. Usually the subawardee is directed to submit invoices to the post-award office, which reviews the invoice and submits it for approval to the investigator. The subaward document should also clearly state when final invoices are due so that they may be received and paid prior to the deadline for the prime institution’s financial report submission. Two methods are most often employed for the final invoice.

The prime institution will make the deadline date for invoices 60 days after termination; that provides a month’s cushion to receive and pay the final invoice (prime

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\textbf{Figure 10: Sample Program Income Procedures and Guidelines} \\
Program income is gross income earned as a result of activities part or all of which are paid for as a direct cost by a federally sponsored grant or contract. Examples of program income include the following:  \\
1. Fees for services performed, such as laboratory tests.  \\
2. Money received from the use, sale, or rental of equipment purchased with project funds.  \\
3. Sales of supplies or equipment purchased or fabricated with project funds.  \\
4. Sale of software, tapes, or publications.  \\
5. Sale of research materials such as animal models or reagents.  \\
6. Fees from participants at conferences or symposia.  \\

The use of program income is defined in the grant agreement; if a research project is being performed, program income is usually additive, meaning that any program income is treated as additional funding available for the conduct of the research project. Other agreements may indicate that the program income is to be treated as deductive (the amount of program income earned is subtracted from the federal obligation leaving the funding the same, but from two sources), or program income can be stipulated as being used to meet any matching or cost sharing requirements of the project.  \\

When program income is either anticipated as part of a project or begins to be earned as part of a project, a separate account should be established to receive the income. The program income budget period will coincide with the total approved project period of the award. Program income may only be used for allocable project costs in accordance with the costing regulations established by the sponsor.  \\

The amount and disposition of the program income will be reported in the final financial report of the parent grant to the sponsor. Final disposition of unexpended program income will be made upon termination of the related sponsored project.  \\
\textit{Source: Adapted from University of Washington materials.}
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recipients generally have 90 - 120 days after termination to pay final invoices). Other institutions will terminate the subawardee one month prior to the termination of their own agreement to assure that final invoices are received in a timely manner.

Subaward invoices should include the same documentation and detail that is required of the prime award.

**Monitoring**

Subrecipient monitoring requirements are set forth in the Uniform Guidance and its annual Compliance Supplement. The post-award administrator should establish procedures that will allow him or her to address the requirements. The first of these is the review of a subrecipient’s annual audit of federal funds reports. Depending on the subrecipient, institutions have set up various mechanisms for receipt and review of these audit reports. When the subawardee is another college, university, or large nonprofit research institution, the report is usually requested at the time of subagreement issuance. While a sample request for the audit report is included as Figure 11, the Uniform Guidance does state that the federal clearinghouse should be used to document the subrecipient’s compliance with the annual audit requirement.

**Figure 11: Sample Request for Federal Funds Audit Information**

Reference:  (name of subawardee)  
Agreement Number:  

XYZ University (XYZ) is required by the Uniform Guidance to determine if our subrecipients have met the audit requirements of the circular and whether they are in compliance with federal laws and regulations. 

Please check the appropriate items below, sign, and return to the address indicated below. I certify to the following:

D (1) We are not subject to the audit requirements of the Uniform Guidance because our organization expended no more than $750,000 in federal funds during the fiscal year ended ________________.

D (2) We have completed our annual federal funds audit for our fiscal year that ended _________ and

D Financial statements received an unqualified opinion from our independent certified public accountants; the administration for federal projects has been audited in accordance with the Uniform Guidance, and there were no material instances of noncompliance with federal laws and regulations or reportable conditions; and there were no findings in the single audit report that are specifically related to awards from XYZ.

D We have completed our annual federal funds audit, and material noncompliance issues and/or reportable conditions were noted. A copy of the audit report and our response is attached.

D There were findings in the single audit report that are specifically related to a prime award from XYZ. A listing of awards and the explanation of the findings as they relate to the prime award is attached.

D (3) We have not completed our annual federal funds audit. We expect the audit to be completed by ___________.

Name (typed or printed)  
Title  
Signature  
Date  

RETURN THIS CERTIFICATION AND DOCUMENTS, IF APPLICABLE, TO THE AS SOON AS POSSIBLE. IF YOU PREFER TO EMAIL THIS CERTIFICATION, THE EMAIL ADDRESS IS ______________.
When the subawardee organization does not meet the minimum requirements for an the annual federal funds audit, some institutions use a pre-award qualification questionnaire to determine whether the organization has the policies and procedures in place to adequately assure compliance with subawardee requirements. Issues that may be addressed in the questionnaire could include what systems the subawardee has in place to assure appropriate fund management, such as information on their accounting system, salary policies, purchasing procedures, and the like.

Because the Uniform Guidance allows the prime institution to make risk determinations based on size of awards, program complexity, and pass-through percentages, there is no one standard utilized for monitoring activities. Most institutions rely on their faculty investigator to monitor subawardee performance and, through approval of subawardee invoices, monitor and approve costs. Because the faculty investigator plays such a large part in this process, it may be useful for the post-award administrator to develop a set of expectations for the investigator. A sample memorandum that can be used to do this is included as Figure 12.

**Desk Audits.** The post-award administrator may wish to make use of periodic desk audits of subawardee invoices when the amount of funding passed through warrants such an audit or when the subawardee is unknown or determined to be a risk.

**International Collaborations.** Subawards to foreign institutions pose particular challenges. For most organizations, risk determinations for foreign institutions are related to whether that institution is a federal grantee. An institution could make the assumption that if the entity meets the requirements to be a federal grantee, its policies and procedures must be adequate. (For a full discussion of international collaborations, see Chapter 3500.)

### ¶3305.16 Award Reporting and Closeout

Accurate and timely closeout of awards is one of the last steps in the post-award administration process. Award closeout is not just the responsibility of the post-award manager, but also that of the investigator (who must file technical reports, for example) and others at the institution (who also might be required to submit required invention and property reports, for example), where applicable. Even in the financial area, the assistance of the investigator and/or the department/unit administrator is often critical to properly closeout an award.

**Notice of Closeout**

Many institutions have developed award closeout procedures and policies that provide advance notice to investigators and department/unit administrators so that encumbrances can be cleared and any necessary account cleanup started. An example of such a closeout procedure is included as Figure 13.

A challenging part of closing out an award is making certain that all “trailing charges” have hit a project account. Trailing charges are those that typically are not expensed to a project account until the next one or two ledger cycles. Typical trailing...
The post-award administrator needs to understand the service center’s billing cycles and plan for them accordingly in the closeout process. At some institutions, the service centers themselves have been put on notice that their charges must be made in a timely fashion (with a period specified) or the account may not be able to accept the charges.

### Subrecipient Billing

Another type of trailing charge often encountered is subrecipient billing. Regardless of the internal review and approval process for subrecipient invoices, it is often the subrecipients themselves that submit late invoices. Care should be taken to specify

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**Figure 12: Sample PI Subrecipient Monitoring Memorandum**

To:

From:

RE: Subaward to
Under federal award

We have recently issued the referenced subaward for work to be conducted under your federal award. It is attached for your files. As the prime grantee, both XYZ University and you, as principal investigator/project director, have certain obligations for oversight of the entire project. These obligations include appropriate monitoring of a subawardee’s performance and costs.

As you are aware, the subawardee is required to submit periodic invoices to the XYZ Accounting Department. In turn, the XYZ Accounting Department will prepare a voucher for payment and send that to you along with the subawardee’s invoice for review, approval, and payment authorization.

Prior to your approval, you should review the invoice to determine that the amount being requested for payment is consistent with the accomplishments of the subawardee during the billing period. Normally, you would most likely be familiar with the subawardee’s performance through telephone conversations, technical meetings, progress reports, or site visits. If you believe there are problems with the invoice, such as equipment purchased without any required prior approval or more labor charged than you believe was expended, you should not approve the invoice for payment. Rather, you should consult with your department/administrative unit and XYZ Office of Sponsored Programs to resolve these issues. In addition, you should not authorize payment until the subawardee has signed the subaward agreement. You will receive a copy of the fully signed agreement from my office.

Final invoices should only be approved for payment if you are satisfied that the subawardee has completed its performance under the award and that the costs incurred are appropriate for that performance.

Should it be necessary to terminate the award early, you should notify XYZ Office of Sponsored Programs in writing. We will then coordinate the termination with you.

If you have any questions about your obligations with respect to subawards issued under your grant, please feel free to contact XYZ Office of Sponsored Programs.

cc: Department/Administrative Unit Administrator (w/encl.)

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charges include internal service center costs for animal per diem, shops, or printing. The post-award administrator needs to understand the service center’s billing cycles and plan for them accordingly in the closeout process. At some institutions, the service centers themselves have been put on notice that their charges must be made in a timely fashion (with a period specified) or the account may not be able to accept the charges.
clearly up front in the subrecipient agreement that invoices received beyond a certain time after the termination date of the agreement may not be honored.

¶3305.17 Incoming and Outgoing Investigators

Faculty investigators arrive and depart institutions on a regular basis. For investigators leaving the institution, it is generally a requirement that a relinquishing statement or estimated statement of expenses be prepared in a timely manner. At some institutions, the estimate is prepared using actual and anticipated expenses at date of termination along with a reasonable contingency (10 to 15 percent) to allow for any unanticipated expenses or trailing charges. In doing so, it is likely that the unexpended balance shown on the final financial report will not be less than anticipated and the institution can assure itself that all of its expenses are covered.

Going back to the sponsor because the costs were underestimated is a time-consuming and not always successful experience. When a faculty member departs, it is important to review and approve any equipment that is departing with the investigator to assure that the institution has the right to transfer such equipment. Any other reports needed (such as invention statements, effort certifications, etc.) should be completed prior to the investigator’s departure. Finally institutions should make sure that the faculty investigator is not delinquent on any technical reports. If technical reports are to be submitted after the faculty member has left the institution, the faculty member should clearly understand his or her responsibility to do so.

Accepting Transferred Awards

For incoming investigators, it is important to establish contact early with the investigator’s former institution in order to transfer ongoing awards in a timely manner. Because transferring awards are rarely received prior to the investigator’s arrival at the institution, it may be necessary to create advance accounts for them using established institutional procedures.

¶3305.18 Special Issues for Smaller Institutions

The smaller institution, sometimes referred to as a predominantly undergraduate institution (PUI) or non-research-intensive institution, faces particular challenges in post-award administration. It is not uncommon in such institutions to find post-award functions located in the institutional business office and the manager of post-award may have a number of other nonsponsored research-related duties as well. (For a full discussion of special issues for PUIs, see Chapter 2300.)

Sponsored Programs ‘Generalists’

Unfortunately the regulations and policies of granting agencies do not make distinctions for the size of a grantee’s funding portfolios. The administrator at the smaller institution must be much more of a generalist than his or her counterpart at a larger institution. Consequently it is essential that the administrator have the resources necessary to fulfill his or her responsibilities, including institutional policies with respect to sponsored programs.
The closeout process for a sponsored research account begins when the account is approaching the termination date of the award. While a funding sponsor may require other closeout reporting or documentation (e.g., technical, property, or intellectual property reporting), the following outlines the closeout process with respect to financial reporting.

1. Ninety (90) days before the account expiration, a first notice is sent to the appropriate department/unit administrator from Sponsored Programs Accounting (SPA). This notice states that the account is about to expire and that the administrator should begin monitoring the account more closely. The same notice is again sent at sixty (60) days and thirty (30) days prior to the expiration date. These notices explain what actions are needed by the department, such as requesting an extension to the account, if necessary, processing appointment forms to move payroll charges to new accounts, and reviewing ledgers to determine what entries are outstanding and what corrective entries may be required.

2. The third week of the month following the end of the project, a draft report of expenditures will be sent to the Principal Investigator (PI) and the department/unit administrator. They will have three (3) weeks to return one signed copy to SPA specifying any outstanding corrections and/or obligations that need to occur before the final financial report can be submitted to the sponsor. PIs who are not able to meet this deadline should notify SPA who, in turn, will notify the sponsor that the report may be delayed.

3. Once the draft report is returned to SPA, any necessary adjustment and closeout entries will be made. SPA will also conduct a review of F&A (indirect) cost charges for accuracy. A final report is then prepared by the accountant and submitted to the SPA manager for review and signature. The amount reported must match what is on the institutional ledger. The report is submitted to the sponsor and a copy is sent to the PI.

4. If the draft report is not returned by the PI, the SPA accountant will use the University ledger generated in the second month after the termination month and prepare a final report to the sponsor based on that information and close the account.

5. After the final report has been submitted, the department/unit will have the responsibility to make sure that any specified outstanding transactions are appropriately recorded on the accounting ledgers and any inappropriate charges are removed.

It is very important that financial reporting is done on a timely basis. Most sponsors require a financial report within ninety (90) to one hundred twenty (120) days of the termination date. If a department does not provide the required information to SPA to meet the reporting deadline, the University could be in jeopardy of not being reimbursed for its costs or losing administrative privileges or rights granted by the sponsor. Costs that are not reimbursed due to a lack of response become the responsibility of the department/unit.

Source: Adapted from University of Rochester materials.

Figure 13: Sample Financial Closeout Procedure

The closeout process for a sponsored research account begins when the account is approaching the termination date of the award. While a funding sponsor may require other closeout reporting or documentation (e.g., technical, property, or intellectual property reporting), the following outlines the closeout process with respect to financial reporting.

1. Ninety (90) days before the account expiration, a first notice is sent to the appropriate department/unit administrator from Sponsored Programs Accounting (SPA). This notice states that the account is about to expire and that the administrator should begin monitoring the account more closely. The same notice is again sent at sixty (60) days and thirty (30) days prior to the expiration date. These notices explain what actions are needed by the department, such as requesting an extension to the account, if necessary, processing appointment forms to move payroll charges to new accounts, and reviewing ledgers to determine what entries are outstanding and what corrective entries may be required.

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3. Once the draft report is returned to SPA, any necessary adjustment and closeout entries will be made. SPA will also conduct a review of F&A (indirect) cost charges for accuracy. A final report is then prepared by the accountant and submitted to the SPA manager for review and signature. The amount reported must match what is on the institutional ledger. The report is submitted to the sponsor and a copy is sent to the PI.

4. If the draft report is not returned by the PI, the SPA accountant will use the University ledger generated in the second month after the termination month and prepare a final report to the sponsor based on that information and close the account.

5. After the final report has been submitted, the department/unit will have the responsibility to make sure that any specified outstanding transactions are appropriately recorded on the accounting ledgers and any inappropriate charges are removed.

It is very important that financial reporting is done on a timely basis. Most sponsors require a financial report within ninety (90) to one hundred twenty (120) days of the termination date. If a department does not provide the required information to SPA to meet the reporting deadline, the University could be in jeopardy of not being reimbursed for its costs or losing administrative privileges or rights granted by the sponsor. Costs that are not reimbursed due to a lack of response become the responsibility of the department/unit.

Source: Adapted from University of Rochester materials.
Faculty Salaries and Release Time

One of the issues raised most often by administrators at smaller institutions concerns faculty salaries and release time. At most smaller institutions, faculty members carry full teaching loads and the addition of a sponsored program does not always mean that the teaching load is relieved. Consequently there are frequent issues surrounding faculty compensation and whether the faculty member’s base salary can be increased to allow for the increased workload. Caution should be used in this area. It is important that the post-award administrator understand the federal costing regulation requirements. The Uniform Guidance Subpart E addresses institutional base salary and provides addresses “extra service” compensation.

§3305.19 Risk Areas and Critical Success Factors

The annual audit plans of the major sponsors of college and university sponsored programs provide a good view of the risk areas that need special attention from the post-award administrator. Audit findings and settlements also provide the administrator a bird’s-eye view of areas that should be of concern. Finally the Uniform Guidance Annual Compliance Supplement gives insight into areas of audit interest. In recent years, areas of risk centered on payroll and effort certification, allowable costs, cost transfers, program income, and subrecipient monitoring. (All of which are discussed above.)

Sponsored research administrators often find themselves having to make decisions based on interpretations of regulations that are not always definitive. Many grey areas exist where judgment calls need to be made. It is for this reason that heavy reliance is placed on policy and training/education programs.

Steps to Mitigate Institutional Risks

What steps might the managers of post-award administrative functions take to lessen institutional risks? Having clear written policies and procedures that are not only in place but enforced is key. Periodic monitoring of identified key risk areas is essential. For example, it may be wise to look at administrative salaries that are being charged to awards and ask

◆ Are they appropriate to the type of award?
◆ Are adequate payroll documentation procedures in place?
◆ What about cost transfers — is one department/unit consistently requesting transfers more than others are?

Internal Audits. Internal audits also can be a critical success factor. If the institution has a program of regular department or unit audits, the post-award administrator may wish to request that sponsored programs administrative procedures become a component of such an internal audit. In addition if there are particular areas of concern, a management review conducted by the internal audit department can determine whether such concerns should be further investigated or are invalid. (For additional information on internal audits, see Chapter 3100.)
Self-Assessments
Post-award administrators may wish to undertake an institutional self-assessment. Many institutions have used the Council on Governmental Relation’s document, *Managing Externally Funded Research Programs: A Guide to Effective Management Practices*, to conduct such a self-assessment. The document sets forth certain principles that are considered keys to compliance. Each principle is then subdivided into practices, defined as measurable conditions that highlight critical components in carrying out each principle. Indicators are given for each practice that provide a suggested measure to use against an institution’s policies and procedures to ascertain whether those policies and procedures are sufficient to assure compliance with administrative requirements. (For additional information on self-assessments, see Chapter 3900.)

¶3305.20 Conclusion
As shown throughout this chapter, post-award administration covers a myriad of topics and tasks and is an integral part of an institution’s stewardship activities with respect to external funds. The challenges posed by sponsor requirements and resultant institutional policies are many and provide post-award administrators an endless variety of issues and circumstances to address. Certainly boredom is never an issue for the post-award administrator!

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¶3320 **Supplementary Material**

This section includes expanded coverage of topics relating to post-award administration. These materials are culled from a variety of authoritative sources.

¶3320.1 **Compliance with Requirements Relating to Program Income**

Jane Youngers, Assistant Vice President for Research, The University of Texas Health Science Center at San Antonio

Every sponsored program office should have a policy dealing with program income. This has been a requirement of federal grants and cooperative agreements for some time and the National Institutes of Health (NIH) began focusing on program income after the investigation of a Big Ten university revealed a substantial amount of unreported program income. Program income is also a compliance requirement of the A-133 audit (Part III, section J).

Program income is defined as gross income that is directly generated by a federally or nonfederally supported grant or earned as a result of a sponsored award. Examples include: fees for services performed, such as lab tests; proceeds from the sale of products, such as software, tapes, or publications; proceeds from the sale of research materials, such as animal models; fees from participants in conferences or symposia; proceeds from the sale or rental of equipment, supplies, or property purchased with project funds; and license fees and royalties from patents and copyrights.

Excluded from the definition of program income is interest earned on advances of federal funds or receipt of the principal of loans, rebates, credits, or discounts, and any interest earned on the principal. (See also discussion of program income at ¶3305.14.)

**Use Separate Accounts**

The best way to track program income is to establish a separate account for each program that generates such income. Not all program income is reportable. For example, unless otherwise specified in the terms and conditions of the award, income from license fees and royalties for patents and copyrighted materials do not need to be reported. While program income is defined as gross income, only net income is reportable.

The reporting obligations exist only for the life of the award unless the terms of the award specify otherwise.

**A-110 Provides Guidance**

Guidance for program income for federal grants and cooperative agreements is contained in OMB Circular A-110. The circular instructs federal agencies to require fund recipients to handle program income in one of three ways:

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(1) Add it to available project funds and use it to meet program objectives.
(2) Use it to meet the nonfederal (cost sharing) share of the project.
(3) Deduct it from the total project or program allowable costs.

For research awards, the additive approach (in (1) above) automatically applies unless otherwise specified in award terms and conditions. For nonresearch awards, the deductive approach (in (3) above) automatically applies, unless otherwise specified in the award terms and conditions.

Restrictions on program income for nonfederal awards vary widely, and the best advice is to check the award conditions before assuming no requirements apply.

**Develop the Policy First, Then Review It**

The first step in achieving compliance regarding program income is to develop a policy. Once a policy is complete, it should be reviewed periodically to make sure it is up-to-date. Items that should be covered in the policy include the following:

◆ The requirements for program income for federal grants and cooperative agreements, as indicated above, including a review of the award for specific terms and conditions (such as the deductive method for nonresearch awards)
◆ A requirement that a separate account be established for each award, as appropriate, to capture and track program income
◆ Inclusion of an item on the proposal routing form that discloses whether program income is anticipated
◆ Roles and responsibilities (who does what) and related procedures at each step in the life cycle of the project

The success of properly capturing and reporting program income relies on identification of such by the principal investigator (PI). The departmental administrator also can assist in this process by keeping the sponsored programs office informed. As such, it is critical that the institution’s policy is widely circulated, and that PIs and administrators receive training as often as needed.

**Establish a Monitoring System**

A monitoring system will help ensure continuous compliance with your program income policy. Designing and implementing a program income monitoring system can be a challenge because program income can be difficult to identify. One possible method is to review departmental revenue; another might be to review any deposits made to a federal account.

Program income represents another compliance area where the proper design and implementation of a policy is necessary. As is the case with most sponsored programs issues, the keys to successful compliance are ongoing communication between sponsored program offices and the PIs and departmental administrators, reinforced by a good monitoring system.
\subsection{Overview of Effort Reporting}

Understanding effort reporting will aid an institution in developing an effective effort reporting or effort certification policy. Institutions should remember to take steps to ensure the policy is widely distributed and well understood by all appropriate faculty and staff. Figure 3320.2-1 provides an overview of effort reporting basics. (See also discussion at §3305.9.)

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D. EFFORT REPORTING BASICS, WITH ROLES AND RESPONSIBILITIES*
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This section defines and describes effort reporting, and includes a short explanation of the roles and responsibilities of various offices and positions at an institution.
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WHAT IS EFFORT REPORTING?
Effort reporting is the mechanism used to confirm that salaries and wages charged to each sponsored agreement are reasonable in relation to the actual work performed. Certification of an effort report must reasonably reflect the activity for which the employee is compensated by the institution. Cost sharing commitments must also be confirmed, either through the effort report, or through some other reporting mechanism.

Some institutions do not use the terms “effort reporting” and “effort report.” However, these institutions still require a confirmation (certification) that the salaries and wages charged to each sponsored agreement are reasonable in relation to the actual work performed. The mechanism for certification may be through a payroll action form, a salary certification form, or other official institutional document. For simplification purposes, “effort reporting” and “effort report” are the terms used throughout this document.

WHY MUST EFFORT BE CONFIRMED/CERTIFIED?
Federal regulations (e.g., Circular A-21) require that institutions receiving federal awards maintain systems and procedures documenting the distribution of activity, and associated payroll charges, to each individual sponsored agreement.

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continued
WHO MUST REPORT EFFORT?

Any person paid (or with a commitment) on a federally sponsored award must certify that the salary paid (or the commitment) is reasonable in relation to the effort (activity) devoted to the award. The individual faculty or staff member may report his/her own effort, or a “responsible person with/using suitable means of verification that the work was performed” may report for the individual.

HOW MUST EFFORT BE REPORTED?

The government does not prescribe a standard method for providing the assurances required under Circular A-21, but identifies specific criteria for an acceptable method and provides examples of acceptable methods (e.g., Plan-Confirmation, After-the-Fact Activity Records). Each institution must develop its own system for effort reporting.

WHEN MUST EFFORT BE REPORTED?

The timing of effort reporting is determined by the method the institution chooses to confirm the effort. For example, the Plan Confirmation methodology requires that “at least annually a statement will be signed…,” and that some form of verification take place whenever there is a “significant change in work activity that is directly or indirectly charged to sponsored agreements…” The After-the-Fact Activity Records methodology requires that for “professorial and professional staff … each academic term, but no less frequently than every six months. For other employees, unless alternate arrangements are agreed to …no less frequently than monthly …”

IS THERE A “BEST WAY” TO DO EFFORT REPORTING?

There are effective approaches, though no “best way.” Circular A-21, in its policy guidance, states: “Each institution … should be encouraged to conduct research and educational activities in a manner consonant with its own academic philosophies and institutional objectives.” Though this language provides for institutional discretion, certain standards must be followed. For example, Circular A-21 states: “The method must recognize the principle of after the fact confirmation or determination so that costs distributed represent actual costs…”

ROLES AND RESPONSIBILITIES

An institution should have an effort reporting policy that defines roles and responsibilities of various offices and individuals at the institution. Upon establishing the policy, a number of offices might have the day-to-day responsibility for managing the effort reporting process. Responsibility could rest with one, or a
number of the following offices: Research Administration, the Controller’s Office, the Vice President of Research, Grant and Contracts Accounting, Sponsored Programs Administration, Cost Analysis, Payroll, or the Budget Office. Regardless of where responsibilities lie, an effective effort reporting system requires coordination between two or more of the offices listed above. Furthermore, those offices with responsibility must also have the authority to enforce institutional policies.

Effort reporting requires active engagement with the business administrators from the academic dean and department offices. Those offices responsible for managing the process should establish a mutually supportive relationship with these business administrators.

The methodology used by an institution (e.g., Plan Confirmation, After-the-fact Activity Records) affects the roles and responsibilities of those involved with effort reporting. Generally, however, effort reports are generated at the central level and are made available at the department level. Ideally, departmental business administrators play an active role in pre-reviewing, distributing, and monitoring the confirmation of effort reports. Faculty members and other individuals responsible for the actual certification should work with their respective administrators when there are questions.

All effort reports should be certified by the individual, or a “responsible person with/using suitable means of verification that the work was performed.” The certification should include language to the effect that the report reasonably reflects the activities for which the employee is compensated for the applicable time period, and/or that the reported salary allocations are reasonable in relation to the work performed. A recommended practice is to retain the original certified effort reports at the responsible central level.

When effort is less than the salaries and wages charged to a sponsored agreement, or less than the cost sharing commitments, additional actions, such as a salary reallocation or cost transfer could be necessary. This could involve actions from the department business administrator, individuals from the payroll office, and/or other applicable offices, and requires well-defined accounting procedures to properly document any applicable transactions.

Effort reports must be archived according to the institution’s record retention policies, agency requirements, Federal Acquisition Regulations (i.e., FAR, 52.215-2(f), “The Contractor shall make available at its office at all reasonable times the records, materials, and other evidence … for examination, audit, or reproduction, until 3 years after final payment … or for any shorter period specified in subpart 4.7 … or for any longer period required by statute or by other clauses of this contract”), and Circular A-110 requirements (i.e., section .53, Retention and access requirements for records. – “Financial records … shall be retained for a period of three years from the date of submission of the final expenditure report…”)

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**Figure 3320.2-1: Effort Reporting Basics** (continued)

Education is a critical component of the effort reporting process. Central administration should have the primary responsibility for implementing an educational program. The program may need to vary by the effort reporting role or responsibility of an individual. Regardless of the role or responsibility, the program should include, at a minimum, the principle concepts of effort reporting and the effort reporting processes.

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Reviewing Cost Transfers

AIS editors

Cost transfers — both into and out of a sponsored programs account — continue to be the subject of recent federal audit activity. Cost transfers often are closely reviewed during OIG audits. Circular A-21, *Cost Principles for Educational Institutions*, allows cost transfers to funded projects when they are reasonable, allowable, allocable, adequately supported, and timely and requires adequate internal controls for monitoring grant accounts.

For example, when one project is in an over-run condition, a principal investigator may decide that the excess costs should be transferred to an unrelated federal project that still has unexpended funds. This practice is impermissible under Circular A-21. Circular A-21 states clearly that such practices are impermissible as follows: “Any costs allocable to a particular sponsored agreement under the standards provided in this Circular may not be shifted to other sponsored agreements in order to meet deficiencies caused by overruns or other fund considerations, to avoid restrictions imposed by law or by terms of the sponsored agreement, or for other reasons of convenience.”

The Department of Health and Human Services (HHS) Office of Inspector General in an audit report has acknowledged, “Transfer of costs from one funding source to another may be proper for closely related work supported by more than one funding source,” the report stated. “However, frequent, tardy, or inadequately supported transfers, particularly if they involve projects with significant cost overruns or unexpended fund balances, raise serious questions about the appropriateness of the transfers and the overall reliability of the university’s accounting system and internal controls.”

In another cost transfer audit, the HHS OIG goes on to clarify that cost transfers allow grantees to move expenses from one funding source to another. An expense initially charged to one grant may later be transferred to another to correct an accounting error. Also, if a cost benefits more than one project, cost transfers may allocate costs among benefitted projects. Accordingly, a grantee may not make a cost transfer to a Federal grant if the cost does not benefit grant objectives, or if the cost should be charged to another grant from industry, foreign governments, or other sponsors. A grantee may not transfer costs to a Federal grant to meet deficiencies caused by overruns, for other fund considerations, or for ‘reasons of convenience’ (Attachment, section C.4 of OMB Circular A-21).²

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With respect to internal controls for monitoring grant accounts, Circular A-110, Subpart C, §215.21, “Standards for Financial Management Systems,” states that an institution’s financial management system should provide (among other things):

1. effective controls and accountability for all funds, property, and other assets,
2. adequate safeguards to assure assets are used solely for authorized purposes,
3. written procedures for reasonableness, allocability, and allowability of costs in accordance with cost principles and terms of the award, and
4. accounting records that are supported by documentation.

In most audits, findings related to cost transfers rest on the fact that the documentation is not sufficient to justify the transfer or the reason why it is late. Auditors have faulted universities for not following their own cost transfers procedures, including undocumented and unauthorized transfers. They examine late cost transfers with particular care to determine whether they are permissible under the provisions of the circular and grant policies. Allegations surrounding mischarged cost transfers also figured in the recent settlement agreement between Yale University and the Department of Justice (see www.usdoj.gov/usao/ct/Press2008/20081223-1.html).

In addition to A-21, agency grants management policies often address cost transfers. The National Institutes of Health (NIH) Grants Policy Statement (Part II, Subpart A) serves as a good reference for cost transfer issues (see Figure 3320.3-1). Following is a list of some compliance risks related to cost transfers and ideas for mitigating such risks.

### Audit Documentation
Documents that auditors often request and review for cost transfer audits include

- cost transfer supporting documentation;
- background information on the cost transfers;
- the accounting system reports;
- transaction reports;
- monthly payroll expense detail reports; and
- the documentation regarding persons authorized to initiate and approve cost transfers.
An excessive number of cost transfers within the institution. The NIH Grants Policy Statement contains language indicating that excessive cost transfers may be an indication of poor internal controls. In essence, an excessive number of cost transfers begs the question, “Why can’t you charge the correct project the first time?”

Transfers made near or after the end of a project that result in additional charges to a federal project. Transfers of this nature are suspect because they give the appearance of either utilizing unexpended funds or moving deficits to another project, and in both instances the presumption is that the costs are unallowable.

Transfers that give the appearance of moving deficits from one federal project to another. These types of cost transfers are specifically mentioned as highly questionable in the NIH guidance and often are questioned by auditors. These transfers are difficult to adequately defend.

Salary cost transfers that are made after effort has been certified. Effort certification indicates that effort has been reviewed and judged to be reasonable. Auditors view any change in effort that constitutes an additional charge to a federal project and occurs after this certification as highly suspect.

Transfers that provide an inadequate explanation. Transfers explained by statements such as “to charge correct project” or “to correct error” would
not be considered sufficient documentation in the event of an audit. Proper documentation includes an adequate explanation of the specific nature of the error and/or any other reason for the cost transfer; the way in which the error occurred; and if 90 days or more have passed since the original charge, the reason why the transfer was not processed in a timely manner and how the situation will be prevented forwarding the future.

◆ **Transfers made more than 90 days after the discovery of the error.** The NIH Grants Policy Statement indicates that transfers should be accomplished within 90 days of the discovery of the error. Does this mean that if an error is discovered 120 days after the date of the transaction that you have an additional 90 days to correct the error? In discussions with federal auditors, it is clear that they expect responsible individuals to review charges on a monthly basis; thus, many institutions are adopting a 90 days from the date of the initial transaction rule in their cost transfer policies, rather than adopting the NIH language.

To mitigate the risk associated with cost transfers, institutions should ensure that their policies are current, their practices comply with their policy, and training is provided periodically. Of greatest interest to the government auditors are those transfers that result in additional charges to federal programs. Cost transfers should be monitored centrally to determine that the institution does not have an excessive number of transfers and that each transfer has an adequate explanation and a certification of the correctness of the new charge by a responsible organizational official.

Additional review and approval processes should be in place for cost transfers that occur more than 90 days from the date of discovery, are made near the end of the project, give the appearance of moving deficits to another federal project, or recertify effort. Approval of these transfers should be made on an exception basis. Institutions should discuss each of these transfer scenarios and decide under what circumstances they are willing to approve these transfers. One common approach is to review each transfer individually based on the circumstances. Above all, careful written documentation is a key to successfully defending these transfers.

Figure 3320.3-2 offers some tips for reviewing your cost transfer policies and practices. Figure 3320.3-3 provides an overview of a cost transfer audit undertaken by the HHS OIG.
Some of the things encountered by HHS OIG in conducting its cost transfers reviews are included below. Institutions would be wise to learn from the mistakes of others.

**System problems** —
- Accounting system does not identify cost transfers
- Transfers done manually, not through the system
- Source document must be reviewed to determine if it is a true cost transfer

**Transaction problems** —
- No documentation of reason for transfer
- Salary and effort transfer after certification
- Transfers from nonfederal to federal grants
- Significant time delay before transfer
- Transfers to next budget period
- Reliance on PI’s “word”

**Lack of documentation** —
- Full explanation of transfer
- Justification for transfer
- Authorization of transfer
- Certification of correctness for effort

Figure 3320.3-3: Process Behind a Cost Transfer Audit

It may be helpful to review the methodology used by Department of Health and Human Services Office of Inspector General in conducting a cost transfer audit of Thomas Jefferson University.

**Objective.** The objective of the audit was “to determine whether the University cost transfers to federally funded grants were documented” in accordance with federal requirements.

**Scope.** OIG audited cost transfers totaling $7,336,960 made between July 1, 2002, and June 30, 2004. It selected a statistical sample of 136 cost transfers totaling $994,840, from a universe of 3,494. OIG’s universe consisted of labor and other direct cost transfers greater than $100 made to federally funded grants during the period July 1, 2002, through June 30, 2004. Fieldwork was conducted onsite.

**Methodology.** To determine if cost transfers complied with federal requirements OIG:

- reviewed applicable criteria in federal law and regulations, agency specific requirements, and university policies and procedures;
- interviewed university personnel regarding cost transfer procedures;
- drew a sample of cost transfers made to federal grants during our audit period; and
- reviewed documents provided by the university to explain sampled cost transfers.

To draw a sample of cost transfers, OIG used a database provided by the university. The university database consisted of all cost transfers to federally funded grants during our audit period. To validate the accuracy of this database, OIG also verified that certain cost transfers, documented in NIH records, were included in the University cost transfer database.

**Results.** The university generally documented cost transfers to federally funded grants in accordance with federal requirements and through documentation and explanation was able to justify all the transfers. No recommendations were reported.

The previously voluntary policy of placing full-text, peer-reviewed journal articles arising from National Institutes of Health (NIH)-funded research in the National Library of Medicine’s PubMed Central (PMC) has now been mandatory for over a year. A provision in the 2009 Consolidated Appropriations Act (P.L. 111-8), signed into law by President Obama on March 11, makes permanent the policy. When it was implemented last April, the mandatory policy was subject to annual renewal.

Compliance with the NIH policy is a statutory requirement and a term and condition of the grant award and cooperative agreement, in accordance with the NIH Grants Policy Statement. For contracts, the NIH includes this requirement in all research & development solicitations and awards under Section H, Special Contract Requirements.

In the Jan. 11, 2008, NIH Guide notice announcing the revised policy, NIH wrote that institutions and investigators are responsible for ensuring that any publishing or copyright agreements concerning submitted articles fully comply with the policy. The requirement that institutions as well as investigators are responsible for compliance is a rather new concept, as publication of research results has traditionally been something investigators did on their own. Perhaps one of the best things research administrators could do is create a policy that gives investigators the tools to negotiate directly with journal editors.

Background. Congress imposed the requirements on NIH in the fiscal year (FY) 2008 consolidated appropriations act (P.L. 110-161). The policy is a term and condition of award for all NIH grants and cooperative agreements active in FY 2008 or beyond, and for all contracts awarded after April 7, 2008. Section 218 of P.L. 110-161 states

The Director of the National Institutes of Health shall require that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine’s PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication, to be made publicly available no later than 12 months after the official date of publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law.

According to NIH, easy access to NIH-funded research will help advance science and improve human health. The policy builds upon the experience with NIH’s voluntary policy, which was published in 2005, and has three goals: (1) A central collection of NIH-funded research publications (the “archive”) preserves vital published research findings for years to come. (2) The archive is an information resource for scientists to research publications and for NIH to manage better its entire research investment. (3) The archive makes available to the public research publications resulting from NIH-funded research.
**Important Dates.** There are two key dates to the policy:

- **April 7, 2008.** As of this date, final peer-reviewed manuscripts arising from NIH funds must be submitted to PubMed Central upon acceptance for publication.
- **May 25, 2008.** As of this date, NIH applications, proposals, and progress reports must include the PubMed Central reference number when citing a paper that falls under the policy and is authored or co-authored by the investigator, or arose from the investigator’s NIH award.

**Ongoing Implementation.** NIH estimates that there are approximately 80,000 articles published each year that arise from NIH funds; this total, according to NIH, “serves as the target for the Public Access Policy.” The policy “success rate” rose from 19% of all NIH-funded papers to 56% of all NIH-funded papers during the first five months after the mandatory requirement took effect (April–August 2008).

NIH published in the Feb. 18, 2009, *Federal Register* an analysis of comments it received in 2008 on implementation of the Public Access Policy and a summary of the changes it made in response to the feedback. Included in the report is NIH’s reiteration of the consequences if a researcher does not submit the manuscript as required. Compliance is both a statutory requirement and a condition of award. If grantees do not comply with the policy, NIH said it may undertake one or more enforcement actions, depending on the severity and duration of the non-compliance. Grantees will have an opportunity to correct the deficiencies before an enforcement action is taken, but NIH also may place special conditions on awards, preclude the grantee from obtaining future awards for a specific time period, or impose additional monitoring.

According to the notice, NIH expects to “continually monitor and refine the communications and procedures surrounding” its policy. Changes will be governed by advice and feedback from stakeholders, questions to the help desk, and paper collections rates. NIH is exploring ways to enhance the utilities on PubMed and integrate them with bibliographic information on the eRA Commons Profile. This could eventually provide a way for project directors/principal investigators and other authors to track their papers that arise from NIH funds, associate them with NIH awards, and automatically obtain PubMed Central Identifiers (PMCID) as they become available. NIH also is exploring ways to facilitate the reporting of papers arising from NIH awards by NIH project number. This should help institutions monitor compliance with the policy.

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**Training Resource**

NIH has prepared a set of training slides that can be downloaded and customized to help institutions in training authors in complying with the Public Access Policy. Link: http://publicaccess.nih.gov/communications.htm
What Should Your Policy Address?

It is important to ensure your compliance process covers the three main components of the NIH policy — relating to copyright, submission, and citations. NIH offers the following “point to consider”:

◆ What submission method will be used?
◆ What version of the paper will be made available on PMC?
◆ Who will submit the paper?
◆ When will it be submitted?
◆ Who will approve the submission?
◆ When can the paper be made public on PMC?

A final peer-reviewed manuscript is defined by NIH as the author’s final manuscript of a peer-reviewed paper accepted for journal publication, including all modifications from the peer review process. The final peer-reviewed manuscript includes all graphics and supplemental materials that are associated with the article. A final published article is defined as the journal’s authoritative copy of the paper, including all modifications from the publishing peer review process, copyediting and stylistic edits, and formatting changes.

NIH outlines four submission “methods,” which authors can use, as appropriate for them and consistent with their publishing agreement:

(1) Publish in a journal that deposits all NIH-funded final published articles in PMC without author involvement.

(2) Make arrangements to have a publisher deposit a specific final published article in PMC.

(3) Deposit the final peer-reviewed manuscript in PMC yourself via the NIH Manuscript Submission System (NIHMS).

(4) Complete the submission process for a final peer-reviewed manuscript that the publisher has deposited via the NIHMS.

(Link: http://publicaccess.nih.gov/submit_process.htm.)

With two of these methods (A and B) publishers voluntarily submit final published articles directly to PubMed Central. With the other two (C and D), authors and publishers can submit final peer-reviewed manuscripts to PMC via the NIHMS.

According to NIH, “Authors should work with the publisher before any rights are transferred to ensure that all conditions of the NIH Public Access Policy can be met. Authors should avoid signing any agreements with publishers that do not allow the author to comply with the NIH Public Access Policy.” Before an article is submitted for publication, the journal’s author instructions should be reviewed for any particular information about the NIH Public Access Policy. (For a database of author instructions, see resources section below.) When an article is submitted for
publication, the investigator should inform the journal that the article is subject to
the NIH policy.

The investigator should review the publisher’s copyright transfer or publication
agreement to make sure it specifically allows for deposit of the final peer-reviewed
manuscript in PMC. If it does not, the investigator should attach an author adden-
dum. NIH has developed recommended language (see http://publicaccess.nih.
gov/FAQ.htm, Question C3) for such an addendum as follows: *Journal acknowledges
that Author retains the right to provide a copy of the final manuscript to the NIH upon
acceptance for Journal publication, for public archiving in PubMed Central as soon as pos-
sible but no later than 12 months after publication by Journal.* Some institutions, such as
Washington University (http://becker.wustl.edu/pdf/NIH-Addendum-108.pdf),
have developed a form using the language.

Beginning with the May 25, 2008, NIH proposal deadline, any applications, pro-
posals, or progress reports made to the NIH must include the PMC or NIH manu-
script submission reference number when citing applicable articles arising from
NIH-funded research (see http://publicaccess.nih.gov/citation_methods.htm).

Figure 1530.5-1 provides additional tips for putting together a compliance pol-
icy/process. Included in Figure 3320.4-2 is a timeline of event surrounding imple-
mentation of the mandatory policy.

Resources
◆ About the Public Access Policy:
   • http://publicaccess.nih.gov
   • Key NIH Guide notices: http://grants.nih.gov/grants/guide/notice-files/NOT-
     OD-08-119.html (September 2008); http://grants.nih.gov/grants/guide/notice-
     files/NOT-OD-08-033.html (January 2008):
◆ NIH Manuscript Submission System
   • www.nihms.nih.gov
   • Tutorials: http://www.nihms.nih.gov/web-help
◆ PubMed Central:
   • www.pubmedcentral.nih.gov
   • PMC Demo: www.ncbi.nlm.nih.gov/Education/PMC
◆ List of journals that submit to PubMed Central: http://publicaccess.nih.gov/
submit_process_journals.htm
◆ Resources for universities compiled by the Association of Research Libraries:
   www.arl.org/sc/implement/nih/guide/nih-resources.shtml (provides links to
   many university sites); a guide to complying with NIH’s public access policy:
   www.arl.org/news/pr/grillot-pubmed-15aug08.shtml
◆ Database of author instructions compiled by Mulford Library at the University of
   Toledo Health Science Campus: http://mulford.meduhioho.edu/instr
Figure 3320.5-1 Compliance Advice from NIH

NIH offers the following advice to investigators, which could also prove helpful to research administrators:

- **Have you identified the key players at your institution who can help successfully implement the policy?**
- **Does your institution wish to develop or amend a standard copyright transfer agreement for all institutional authors?** A standard copyright transfer agreement may make it easier for faculty, students and employees to comply with the policy, and decrease questions and confusion.
- **What institutional policies and guidance may need to be modified to implement the Public Access Policy?** Institutions may wish to consider modifying formal guidance for peer-reviewed publications arising from NIH funds. This guidance may include faculty and student handbooks. Institutions may also wish to consider internal procedures and quality assurance checks for submitting funding-related submissions to NIH in light of changes to the Public Access Policy.
- **Does your institution wish to develop a plan to inform potential authors about the policy change, its implications and how they can comply?** Institutions may want to announce the policy change internally and incorporate discussions of Public Access into training for institutional staff, faculty and students. NIH has an FAQ on policy and online training on how to submit articles that institutions may want to modify or disseminate.
- **Do staff who may receive questions from your authors know where to go for help?** Institutions may also wish to designate internal leads who can answer questions on the policy.
- **Does your institution wish to designate an individual or department to help investigators submit their own manuscripts?** Many university libraries support the Public Access policy by offering training on the policy and submission, and answering questions about the policy, copyright and the submission process. Other institutional officials, such as grants and contract staff and legal counsel, may receive questions about the policy from faculty. It may be helpful to identify staff likely to receive these questions in advance, and ensure that they have the ability to answer these questions directly or refer authors to the right place.
- **Is your institution aware of the multitude of resources freely available online?**
- **Does your institution wish to participate in any public resources on compliance?** The research, publishing and medical library communities have developed a number of Internet resources to support and understand public access.

Figure 3320.5-2 Timeline: NIH’s Implementation of Its Mandatory Public Access Policy

March 2009: Legislation Makes Policy Permanent. A provision in the 2009 Consolidated Appropriations Act (P.L. 111-8), signed into law by President Obama on March 11, makes permanent NIH’s public access policy. The law states, “The director of NIH shall require in the current fiscal year and thereafter that all investigators funded by the NIH submit or have submitted for them to the National Library of Medicine’s PubMed Central an electronic version of their final, peer-reviewed manuscripts upon acceptance for publication: Provided, That the NIH shall implement the public access policy in a manner consistent with copyright law.” When implemented last April, the mandatory policy was subject to annual renewal. Link: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-09-071.html.


Jan. 2009: Bill to Scrap Policy Introduced. John Conyers, D-Mich., and four colleagues introduce H.R. 801, Fair Copyright in Research Works Act, which would put the NIH policy on hold. In introducing a similar bill last session, Conyers said it “would restore intellectual property protections for scientists, researchers, and publishers until a more thorough analysis of the access issues and a determination of an appropriate policy can be performed by the Register of Copyrights in consultation with economic experts.” Link: http://thomas.loc.gov.

Sept. 2008: Preliminary Analysis of Comments. In response to a public meeting and a request for information on its mandatory public access policy, NIH received “613 unduplicated comments from a broad cross-section of the public, including NIH-funded investigators, members of the general public, patient advocates, professional organizations, and publishers.” In follow up, NIH issues a 29-page analysis. Link: http://publicaccess.nih.gov/analysis_of_comments.nih_public_access_policy.pdf.

Sept. 2008: Compliance Reminder. NIH issues a notice that “provides important reminders concerning grantee demonstration of compliance and the location of citations for papers in applications, proposals and progress reports.” It also states that in FY 2009, NIH will begin notifying PDs/PIs “if citations of papers included in applications, proposals or progress reports appear to fall under the policy but lack a demonstration of compliance.” Link: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-08-119.html.


May 2008: FAQs Updated. In recent additions to its FAQs, NIH speaks to the consequences if grantees fail to comply and other clarifications. Link: http://publicaccess.nih.gov/FAQ.htm.


Jan. 2008: FAQs Posted and Website Established. NIH establishes a Web portal and posts FAQs providing authors, their institutions, and their publishers with guidance on the implementation of the policy. Link: http://publicaccess.nih.gov.
Figure 3320.5-2 Timeline (continued)

3320.5  **Time and Effort Reporting: Recent Audit Findings**  

AIS editors

Perhaps the most problematic area that has been and continues to be audited by both the HHS OIG and the NSF OIG is labor charges, with a focus on time and effort reporting. The NSF OIG initiated audits of effort reporting at universities that received significant amounts of NSF funds. The HHS OIG includes the payroll distribution system and effort reporting in its audits. A review of findings in the OIG audit reports involving time and effort reporting can be instructive in assisting institutions develop effective internal controls and policies in this area (see also ¶3305.5 and ¶3320.2).

The principles that govern how colleges and universities must document time and effort on federal grants and contracts appear primarily in section J.10 of OMB Circular A-21, *Cost Principles for Educational Institutions*. The provision recognizes that in an academic setting, teaching, research, service, and administration are often inextricably intermingled. A precise assessment of factors that contribute to costs is not always feasible, nor is it expected. Reliance, therefore, is placed on estimates in which a degree of tolerance is appropriate. ... There is no single best method for documenting the distribution of charges for personal services. Methods for apportioning salaries and wages, however, must meet the criteria [in section J].

The circular requires each grantee to maintain a system of distributing salary charges to federal grants that results in a reasonable allocation of salary charges to each grant. The salary distribution system must include a periodic review to confirm the reasonableness of salary charges to federal projects. In the case of faculty and other professional employees, that confirmation may be provided as infrequently as every six months or even once a year (depending on the type of effort reporting system). These confirmations are usually in the form of an effort or activity report or a salary distribution report and must be signed either by the employees whose salary charges are being confirmed, or by “responsible persons with suitable means of verification that the work was performed.” These signatures confirm that “the distribution of activity represents a reasonable estimate of the work performed,” or that the salary distribution is “reasonable in relation to the work performed.”

**General Payroll System Requirements**

Section J.10.b. of the circular (2 CFR Part 220, Appendix A) sets out the general requirements for the payroll distribution system. The section sets out six payroll distribution standards, all of which should be reviewed and measured for compliance during an internal audit of the payroll system and before the government conducts an audit. Auditors cite the following six standards and discuss findings in relation to them:

“(a) The payroll distribution system will be incorporated into the official records of the institution; reasonably reflect the activity for which the employee is compensated by the institution; and encompass both sponsored and all other activities on an integrated basis....”
Unofficial records alone are not sufficient to satisfy this standard, although they may supplement the official records.

“(b) The method must recognize the principle of after-the-fact confirmation or determination so that costs distributed represent actual costs ... Direct cost activities and F&A cost activities may be confirmed by responsible persons with suitable means of verification that the work was performed. Confirmation by the employee is not a requirement for either direct or F&A cost activities if other responsible persons make appropriate confirmations.”

This standard has been raised in a number of audits, primarily because the “responsible person” did not have direct knowledge of the work performed or sufficient documentation to verify the effort.

“(c) The payroll distribution system will allow confirmation of activity allocable to each sponsored agreement and each of the categories of activity needed to identify F&A costs and the functions to which they are allocable.”

Universities have been held accountable when a PI charges 100% of effort to a grant and the records show that, for example, he taught a course during the time period.

“(d) Practices vary among institutions and within institutions as to the activity constituting a full workload. Therefore, the payroll distribution system may reflect categories of activities expressed as a percentage distribution of total activities.”

“(e) Direct and F&A charges may be made initially to sponsored agreements on the basis of estimates made before services are performed. When such estimates are used, significant changes in the corresponding work activity must be identified and entered into the payroll distribution system.”

NSF has cited universities for not meeting this standard because the institution has no clear definition of “significant changes” or has not accurately accounted for changes in effort.

“(f) The system will provide for independent internal evaluations to ensure the system’s effectiveness and compliance with the above standards.”

In the recent NSF time and effort reporting audits, the universities were found to be in noncompliance because they had relied on the A-133 audit to satisfy this requirement. This, NSF asserted, was insufficient.

**Document Requests from Auditors**

For labor/time and effort reporting audits, auditors usually will request the following types of documentation:
NSF OIG: Effort Reporting Audits

FY 2010
Audit of Effort Reporting System, University of Delaware, (OIG 10-1-008)
Effort Reporting System, Washington University in St. Louis (OIG 10-1-005)
Audit of Effort Reporting System, University of Nevada, Reno (OIG 10-1-003)
Effort Reporting System, University of Wisconsin, Madison (OIG 10-1-002)
Payroll Distribution and Effort Reporting System, the Research Foundation of SUNY, Stony Brook (OIG 10-1-001)

FY 2009
Purdue University, Effort Reporting System (OIG 09-1-013)
Arizona State University, Effort Reporting System (OIG 09-1-012)
Audit of Effort Reporting System, Georgia Institute of Technology (OIG 09-1-009)
Audit of Effort Reporting System, Cornell University (OIG 09-1-008)
Audit of Effort Reporting System, University of Arizona (OIG 09-1-006)

FY 2008
Audit of Labor Effort Reporting System, Vanderbilt University (OIG 08-1-014)
Audit of Effort Reporting System, University of California - San Diego (OIG 08-1-010)
Audit of Labor Effort Reporting System, University of Illinois at Urbana-Champaign (OIG 08-1-005)
Audit of Payroll Distribution System, University of Utah, Salt Lake City (OIG 08-01-002)
Audit of Effort Reporting System, University of California, Berkeley (OIG 08-1-004)

FY 2007
Audit of Payroll Distribution System, California Institute of Technology (OIG 07-01-013)

FY 2006
Audit of Effort Reporting System, University of Pennsylvania (OIG 06-1010)

Link to all audit reports: www.nsf.gov/oig/auditpubs.jsp.

◆ All policies and procedures relating to time and effort reporting and the payroll distribution system
◆ Award documents to determine whether the grant had any terms and conditions that would affect allowable labor charges to the award and whether the amount of effort pledged was actually expended and charged correctly
◆ Appointment letters or other documents supporting the approved annual salary for employees
◆ Fiscal Year Salary Change forms or other documents supporting the approved annual salary for employees
◆ or time records documenting 100 percent of each employee’s compensation as allocated to sponsored or non-sponsored research projects
◆ Documentation detailing the actual salary and wages charged to sponsored projects and other activities for each employee during each reporting period (e.g.,
Distribution of Payroll Expense Summary, Personnel Activity Reports), as well as approval and signoff

◆ Management reports detailing the actual salary and wages charged to sponsored projects and other activities for each employee during each reporting period
◆ PI confirmations certifying the total aggregate labor costs charged to each NSF award during the effort reporting period
◆ Other business documents used to verify work performed and proper charging
◆ Monthly financial reports showing total expenditures for each award, including salary and wages
◆ Internal audit and accountability reports with findings regarding the payroll distribution/effort reporting system or salary and wage cost
◆ Most recent A-133 audits

In addition to document and transaction review, auditors may conduct interviews, either by phone, e-mail, or during on-site visits, with appropriate personnel, including principal investigators, internal audit staff, and sponsored program and financial personnel. The purpose of the interviews is to corroborate the effort reported, the effort charged, and the effort committed; interviews also review the processes the university follows, such as how an individual who signs off on an effort report verifies that the work was actually performed or how a PI ascertains what work was actually performed on an award.

To determine whether labor costs were accurately recorded and charged to NSF, auditors compare the amounts in appointment letters or other documentation supporting salaries and wages paid to the amounts recorded in the official reports. For timeliness, they compare the date the effort reports were provided to business managers to the date they were approved and signed. They also review the institution’s policy and procedures regarding these actions.

Several of the NSF audits added as a specific objective a determination of whether the level of PI effort pledged in a grant proposal and award documents was actually contributed by the faculty member. Auditors reviewed processes for reporting and tracking PI effort and compared the effort pledged to the approximate actual percentage of actual effort.

Auditors also reviewed the most recent A-133 audit reports for any findings related to effort reporting. However, they also reviewed the audits and the work papers to determine whether the scope of the audits satisfied the A-21 requirement to conduct an “independent evaluation” of the payroll distribution system.

**Basic Findings**

Both the HHS and the NSF audits made similar findings with regard to university payroll distribution systems and effort reporting:

◆ *Effort reports signed by individuals with insufficient knowledge of the work performed.*
  Both agencies faulted universities for not providing sufficient training and information to those who signed off on effort reports.
◆ Missing or incomplete documentation that serve as the “suitable means for verification.” Auditors found that many university managers did not know what the term meant and what documentation they needed to satisfy the requirement.

◆ Policies and procedures do not reflect grants management regulations and requirements.

◆ Failure to follow the university’s policies and procedures, for example, on the deadline for submitting verified effort reports. Even though A-21 does not establish a deadline for submitting verified effort reports, the OIGs have held universities accountable for meeting the deadlines in their own policies.

◆ Failure to include all institutional effort in the effort percentage calculation or to calculate the percentages based on a normal work week when, in fact, a longer work week is the actual time spent. Effort report forms must account for all effort for which the individual is compensated by the institution. This would normally include all effort expended on institution-compensated sponsored research, administration, instruction, and unsponsored scholarly activity, clinical activity, and other activity. Even where the number of hours of effort the individual expends each week substantially exceeds the “normal” work week of 40 hours, it is necessary to base effort percentages on total effort, not just “normal” effort. Common manifestations or variations of this problem include the following:

  • Use of a “normal” 40-hour work week as the basis for the effort percentage calculation. As indicated above, this is not permissible if the employee actually averages more or less than 40 hours per week on institutional activities.

  • Use of an overly expansive concept of employees’ “own time.” Each institution is permitted, within reasonable limits, to define the activities for which it does or does not compensate its employees. Once those activities are defined, normally it does not matter for effort reporting purposes when the activities are performed. For example, the fact that a faculty member does administrative work or proposal writing on his or her “own time” — weekends or vacation — does not mean that the work is not institutional activity and may be excluded from the denominator of total effort. If the nature of the work makes it institutional activity, normally it must be included in total effort.

◆ Charging 100 percent of effort to a grant. While some faculty may have no duties other than research, most PIs also carry teaching or other administrative duties. In addition, time spent preparing grant applications may not be direct charged to the grant.

◆ Direct charging a grant for unrelated activities that were F&A or university charges. Several audits have faulted universities for charging the grant with unrelated work, and where the OIG finds that this is intentional, false claims act allegations may be filed.

◆ Inaccurate statements of effort on federal projects.
◆ Improper calculation of summer faculty compensation. Both HHS and NSF have found that calculations did not follow agency rules; in one audit, HHS labeled this “excessive compensation.” In at least one case, NSF OIG found that faculty had received salary increases in April, and the university should have prorated the salary for the summer, rather than using the increased rate.

◆ Failure to account for unfunded effort. If a payroll distribution system does not account for unfunded effort, both voluntary and involuntary, HHS and NSF audits will list this as an internal control weakness.

◆ Failure to reconcile effort report data with salary charges. Auditors compare the effort report data with documentation of salary to confirm the amount charged is accurate.

◆ Failure to adjust for significant changes in effort levels between effort reports. NSF has taken a particularly hard-line position on this finding, recommending that a university formally define “significant changes” in its policies and procedures.

◆ Failure to approve effort reports in the time frame specified in the university’s policies and procedures. Both NSF and HHS have faulted universities for late submission of approved effort reports, despite the fact that it is the university’s own deadline that has been missed, not one stated in a grants management circular.

◆ Effort committed in grant proposal not charged to the grant. Auditors are reviewing the grant document for time committed and checking the amount against the effort reports. If the time is reduced by 25 percent or more, the funding agency must approve the reduction in time.

◆ A-133 Audit Sufficiency. NSF auditors routinely concluded that the A-133 audits were not sufficient to satisfy the A-21 requirement of an independent evaluation of the payroll distribution system.

It should also be noted that, in a departure from the previous OIG audits in the series, in the recent audit of the University of Nevada-Reno released in fiscal 2010, the OIG also examined the university’s management of conflict of interest. In its 2009 semiannual report to Congress, OIG stated that it would be undertaking similar COI audits in the future, at the request of the U.S. Senate.

Recommendations from the OIG
One difference between the HHS and NSF audits is the specificity of the recommendations to address the audit findings. HHS audits of the payroll distribution system and time and effort reporting (unless they resulted in a settlement) generally conclude with the recommendations that the university improve its payroll distribution system to ensure that changes to planned activities are identified, annual effort certification procedures specify the means for verifying the actual work performed, and certifications are performed timely, or other similar phrases relating to the audit findings.

NSF audit recommendations, on the other hand, are far more prescriptive for policies and procedures and operations. Recommendations go beyond instructing...
the university to ensure that its policies and procedures comply with federal requirements. The audit reports have recommended that universities
◆ establish procedures so that business managers will know what types of documentation must be reviewed before verifying an effort report;
◆ require a written after-the-fact verification from the PI regarding the effort before a report may be verified;
◆ require hourly employee timesheets to itemize specific projects or activities or provide other documents that support 100 percent of the employee time on both sponsored and non-sponsored projects;
◆ define what constitutes “significant changes” in estimated labor effort for purposes of reallocation and establish acceptable tolerance limits for certifying such estimated labor effort; and
◆ hold department chairs accountable for timely submission of reports.

According to NSF, “there are many areas where the Circular does not prescribe specific and quantifiable standards. Accordingly, it is important for an institution to establish its own standards in these areas.”

With regard to the insufficiency of the A-133 audits to satisfy the “independent evaluation” criteria, one NSF audit report stated that “a comprehensive evaluation of the system should have included testing of salary charges to Federal awards to validate (i) confirmation reports were approved by certifying officials with suitable means of verification that the work was actually performed, (ii) the certifications were timely based on the university’s established standards, and (iii) the reported level of effort on the confirmation reports was accurate based on employee interviews.”

Now that the series of effort reporting audits has concluded, NSF intends to produce a report that details its findings and recommendations for NSF and ultimately the grantee community.
Ins and Outs of PI Transfers

Principal investigators (PIs) sometimes change jobs. And when one does, an institution must contend with the grants on which a PI is working. The most basic thing to remember is that everyone must agree to the transfer: the funding agency, the PI and his or her dean, the relinquishing institution, and the receiving institution. Establishing contact early in the process between both institutions can enhance the transfer of ongoing awards in a timely manner.

In most cases, the federal funding agency will accommodate the request to transfer a grant award by terminating the existing award at the original institution and making a new award to the new institution.

Internal Notification: Get Everyone Onboard

The first step for a PI who is planning to leave and transfer his grants is to contact the department chair or dean to seek concurrence that the grant should leave with the PI.

Are there other investigators working on the grant who will lose their jobs if the grant is transferred? Are other investigators willing to move with the grant? Are there research assistants from foreign countries with visas that are tied to the grant? Are there students working on the grant who are unable or unwilling to move with it? Assessing these sensitive questions will help the institution determine exactly how it wants to address the PI’s departure.

In addition to transferring the grant outright to the PI’s new institution, the university could opt to (1) assign a new PI; (2) assign a new PI and subcontract work to the prior PI at his new institution; or (3) transfer the grant to the new institution but subcontract work back to the prior institution. Each of these options is allowed by the funding agencies.

Equipment: Does It Stay or Go?

A more difficult issue to handle may be the question of laboratory equipment. All equipment issues need to be worked out well in advance of the PI’s transfer.

PIs frequently expect to take laboratory equipment with them when they leave an institution. The institution should review and approve any equipment that is departing with the investigator to assure that the institution has the right to transfer such equipment. It is also important for the institution to determine if other investigators are using the equipment in question.

The situation can become more complicated in those instances where a PI argues that the university purchased the equipment as a condition of her accepting a position at the university. Barring a written agreement, the university generally still retains ownership of the equipment but may wish to transfer it in any case. In some cases, the institution where the PI is going may have the equipment in question available for the PI’s use, or it may be willing to purchase it.
Inform the Sponsor

Once all parties have agreed in theory to the transfer of the grant, the relinquishing institution must complete a relinquishing statement and submit it to the funding agency. Funding agencies generally have established practices for transferring a grant and forms that must be completed by the investigator and the institution. These forms relinquish the original institution’s interests in the grant and provide an estimate of funds remaining. One tip to remember is that it is better to underestimate the balance of remaining funds than to overestimate it to avoid surprises later on.

Submission of the relinquishing statement starts the clock on the final status report that the relinquishing institution must file within 90 days. During this time, it should ensure that subcontractors are terminated, equipment is transferred, all purchasing has stopped, and that the PI prepares the final status report.

The new grantee institution, meanwhile, must submit a modified application for funding to the agency. It must detail the budget, explain how it meets requirements for supporting resources, submit an altered work statement (if appropriate), submit a new F&A rate, seek and obtain institutional review board (IRB) and institutional animal care and use committee (IACUC) approval when needed, and arrange for the acceptance of equipment from the sending institution, as appropriate.

IRB and IACUC approval is a key concern. It can take considerable time to gain approval, so the receiving institution will want to provide assistance for this process because funding agencies will not release funds for nonexempt research on human or animal subjects that it is not approved by the IRB or IACUC.

One final issue for the two institutions to consider before transferring a grant is their respective F&A rates. If the receiving institution has a higher F&A rate than the sending institution, it will be restricted to the lower level for the first budget period. If the receiving institution has a lower F&A rate, it will not be allowed to claim the higher rate of the old institution; however, funds may be rebudgeted in future budget periods.

A new notice of grant award will be generated by the funding agency, upon transfer of the grant. However, this will be adjusted if the relinquishing statement estimates turn out to be incorrect. The funding agency will determine how to transfer unexpended funds that the institution may possess.

Tie Up Loose Ends

Departments should be sure to find out who is using equipment before approving its transfer. This is particularly important in clinical trials. It is also not unheard of for a PI to mistakenly attempt to take with him equipment that was paid for by another grant or budget and is still committed for that purpose, so careful review of equipment is essential.

Another important loose end to tie up is the records related to a study. The institution must retain notebooks and study records for the period required by the
agency, so arrangements must be made for the PI to take copies of necessary records or to make copies for the university.

The institution should determine whether any reports are pending (such as invention statements, effort certifications, etc.) that should be completed prior to the investigator’s departure. Institutions should make sure that the PI is not delinquent on any technical reports.

Remember also to double check that the PI has not left behind animals without planning for their disposition. As the transfer date approaches, wrap up any remaining loose ends. Ensure that pagers and telephones are shut off, mail addresses are changed where necessary, and that standing purchase orders are cancelled.

**Receiving Institution.** While the sending institution is closing down the grant, the receiving institution needs to facilitate the arrival of the PI. If the institution requires any training for PIs, the PI should receive the training as soon as possible. Safety committee approvals for lab space or specific projects should be obtained, and advance spending accounts should be established by the administrative office for the grants that will be transferred.

Receiving institutions should request and review the original notice of grant award in order to become familiar with all the institutional requirements before accepting the grant. Cost sharing obligations, for example, will likely not be reflected in the relinquishing notice. Because transferring awards are rarely received prior to the investigator’s arrival at the institution, it may be necessary to create advance accounts for them using established institutional procedures.

**Anticipate Problems to Forestall Them**

So, even with all this advance notice and preparation, sometimes things do go wrong. Administrators should keep their ears to the ground to learn of potential problems so department chairs and deans can be notified promptly. For example, if the sponsored research administrator hears through the grapevine that a faculty member is planning to leave, be proactive and contact him or her.

Pay special attention to visa issues, because individuals whose visa eligibility relies on their continued work on a research project will need plenty of notice if the grant is transferred. Likewise, junior faculty members will want to know that research grants are moving so that they can plan accordingly.

Find out whether the departing PI intends to take specimens with him for future research. These need to be subject to material transfer agreements. And if the PI is continuing to conduct research on material that constitutes intellectual property (IP), remember that the rights to the IP are not automatically relinquished with the grant. The researcher is free to continue conducting research on the IP, but if it is commercialized, then both the sending and receiving institutions could have a stake in the patent and royalties related to the research.
For New PIs: How to Renew Your Grant

National Institutes of Allergy and Infectious Diseases, NIH

To keep your project funded once the grant ends, you will need to apply for support and undergo initial peer review again. This step is a common failure point for new investigators — one big change: you no longer have the new PI ladder as a leg up.

So it’s no surprise that a good strategy is essential. Start laying out a game plan by answering these questions:

◆ Do I want to continue the current project at roughly the same level of resources?
◆ When should I apply?
◆ How will I maintain funding if I don’t succeed on the first try?

Renewal or New?

Your situation and the science dictate whether it is more advantageous to renew your grant (submit a renewal) or apply with a "new" application. To make this decision, it may help to conceptualize the difference between long-term research goals and Specific Aims, your short-term objectives. If you think of your long-term goals as a bar, your Specific Aims are one segment. Whereas your goals may last a lifetime, you must complete your Specific Aims within the grant award period.

◆ Renewal. Choose a renewal if you want to continue your research toward the same goals you have been pursuing, but with new Specific Aims.

◆ New application. Choose a new application if you are planning a project that works toward new goals, even if you stay in the same field.

In both cases, reviewers judge the merits of the research, its relationship to your previous research, and the impact you have made on your field of science. If your research has gone well, peer reviewers are likely to give you an edge no matter which approach you take because you have a proven track record, and they know it takes time to build a successful research team.

Still, many experienced investigators feel it is advantageous to apply with a renewal if you have made progress and want to continue the same long-term project. Your peer reviewers take into account what you have accomplished when assessing the merits of your new application.

The following is what NIAID advises.

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Overview

- To continue receiving funding, there are two choices: submit a renewal or apply with a "new" application. Know the criteria for deciding.

- Know how much a new application must be different in content and scope from the previous one.

- To avoid a gap, think about applying one or more review cycles early to gain extra time in case you must resubmit — if you can. Weigh the pros and cons, and ask your program officer for advice.

- In some cases, waiting to spend more time polishing your application is a better strategy than rushing to meet a receipt date.

- NIH does not set a time limit for submitting a renewal, but reviewers will probably be concerned by major gaps between projects.

Apply with a renewal if you . . .

1. Plan to continue your project under the same activity code (e.g., R01), with new Specific Aims.

2. Made progress and accomplished most of your Specific Aims. You didn't have to follow your original Research Plan as long as you made progress (you may have revised your Specific Aims in mid-course).
   - It's key that you successfully conducted relevant research, got results, and then used those results to pursue the next set of experiments.

3. Submitted under a request for applications (RFA) and the bullets above apply.
   - If the RFA no longer exists, you can submit an investigator-initiated renewal.
   - Use the parent program announcement; for example, an R01 uses the Parent R01. Read it carefully. You are playing by new rules, for example, new receipt dates, forms, page limits, and review criteria.

Even though you are submitting a renewal, consider changing your title to reflect the new Specific Aims you are proposing.

Apply with a new application if you want to . . .

1. Significantly change or expand the scope of your research.

2. Start over with a new idea (if the research is not going well or you have not accomplished several Specific Aims).
   - Though your application needs substantially different aims, it can be a spinoff of the original line of research.
• Be sure to use a new title.

3. Use a new activity code; for example, switch from an R01 to an R21.

4. Apply under a request for applications (RFA). The application is new even if you are continuing the same line of research. Follow all procedures for a new application. Note that this is an advantage of applying under an RFA: since you can use the application again, you get an extra try to get it funded.

If you have used up your one resubmission of your renewal application, talk to your program officer for advice on which if any aspects of the application to consider retaining.

Here’s another approach: split your project into two applications — one for a different set of research goals and one for a renewal to continue the existing project. Be careful not to dilute the original application’s quality. In your cover letter, state that you are using this approach.

What qualifies as a new application?

A new application should be substantially different in content and scope from the previous one, for example, new Specific Aims and a materially different Approach section. If you need help deciding which application type to use, talk to your program officer.

Decide When to Apply

Consider whether to apply early rather than wait until the last possible receipt date before you would incur a funding gap. To avoid a gap, think about applying one or more review cycles early to gain extra time in case you must resubmit. In FY 2010, roughly 36 percent of NIAID’s R01 renewals got a fundable percentile on the first try.

But here’s the catch: no matter when your application arrives, reviewers expect to see accomplishments. If your work is progressing slowly, it’s better to wait to get results that you can describe in the application. So ultimately your timing hinges on your comfort with your progress and the length of the grant (if you have a three-year award, you may not have enough data to apply early).

Pros and Cons of Being Early. Weigh the pros and cons for applying early, and ask your program officer for advice.

Pros
• If you apply early, you can get earlier feedback on your application.
• You can gain time to revise and resubmit if needed. A resubmission would not harm your chances of getting funded. eRA Commons keeps both versions; we could fund the earlier one if your resubmission fares worse.

Cons —
• If you apply before your research yields significant results, you could use
up the initial goodwill of the reviewers, who may feel your application is premature.

- Your application will likely be affected by the unknowable payline for the next fiscal year, which can make it harder to plan your strategy. We cannot fund your new grant until just before the old one ends.

In some cases, waiting to spend more time polishing your application is a better strategy than rushing to meet a receipt date, and the delay may have only a small impact on timing of an award.

Should you face a gap in funding despite your best efforts, you can extend your grant for one year at no cost through a “no-cost extension.”

**Resubmitting with a Different PI... Is It a New App or a Resubmission?**

That was the question posed in an August 29, 2011, posting to NIH’s “Rock Talk” blog. The answer is: “It’s a resubmission. If the overall scientific direction and approach of the project remain the same, it is still considered a resubmission application even if the principal investigator changes. Remember, a rationale for the change should be provided in the introduction.” Link: http://nexus.od.nih.gov/all/rock-talk

**No Time Limits . . . But**

Another timing issue is: How long can you wait to submit a renewal after your grant ends? NIH does not set a time limit, but reviewers will probably be concerned by major gaps between projects because the science has likely changed. Take this into account when writing the application, and prepare a new application if the research is dated.

If the research is current with the latest science, address the following points:

- Explain that your planned research is in sync with the science of your field.
- State what you have done during the hiatus.
- Highlight any new preliminary data.
Figure 3320.7-1: Renewal ‘How To’

A renewal should clearly link back to your previous grant’s Specific Aims, show progress, and not duplicate the aims of the previous grant.

Know These Do’s and Don’ts

Avoid a gap. Apply as early as you can before the end of your grant to avoid a break in funding.

Get preliminary data. Make sure you have data before sitting down to write.

- If your application is not funded after the second try and you need preliminary data for a new topic, you could apply for an Exploratory/Developmental Grant (R21) or Small Grant (R03).
- Make sure that grant doesn't overlap with plans for your R01.

Revisit the science. Review your Research Plan, especially the Significance section.

- Make sure it reflects the latest research in your field.
- Make sure you stress the impact of your research on the field.
- Describe the significance of the renewal in the larger science and health context too.
- Show the flow of the project in terms of your past and next steps. Describe how the new project is part of a logical progression for your research.
- Include most of this information in your progress report as well.

Showing progress is enough. You don't have to do everything you promised.

- Reviewers care more about whether you got meaningful results than conducted all the experiments you outlined in your application.
- Changing direction is okay as long as you have not changed the project's scope.
- Describe your work and highlight your successes in your progress report. Note these in the Significance section of your Research Strategy.

Revise even if your R01 application is nominated for selective pay.

- You may still need to wait until the end of the year to get funded even if your application is approved for selective pay.
- Even if you resubmit and get a worse score, we can fund the previous application and make the award provided the score is within the final payline at the end of the year.
- Keep in mind the length of time it may take from the date you apply to the date you get an award.

Keep up with your peers. Assess what the outside world (including reviewers) thinks of your research.

- Know who’s in your field and make sure they see you as a leader.
- Funding is about both science and self-marketing. Recognition primes others to consider you as a leader.
- Show accomplishments through publications, invitations to present, and conference abstracts.
- Request enough travel money to attend two or three meetings a year.
- Be specific about which meetings, where, and why in your budget justification.
- Meet reviewers at meetings.

Publish before you apply.

- Don't wait till the end of your grant to publish!
- Get your papers published or papers accepted for publication before you apply.

Both the Public Health Service Policy on Humane Care and Use of Laboratory Animals and the U.S. Department of Agriculture regulations under the Animal Welfare Act define the eight functions of an institutional animal care and use committee in more-or-less the same way. However, Jerry Collins, NIH Office of Laboratory Animal Welfare consultant, would add a “ninth, overarching” function to the list: “The IACUC must have in place means to get feedback on what happens to the animals after approval for their use has been granted.” Collins, who is also a professor of anesthesiology at Yale University School of Medicine, discussed his ninth IACUC function, which he said was “not on the list but essential to success,” as well as the standard eight, at a recent webinar sponsored by OLAW — IACUC Responsibilities Beyond Protocol Review and Facilities Inspection. Susan Silk, director of OLAW’s division of policy and education also spoke at the webinar.

So what are the eight functions of an IACUC as outlined in the PHS policy? Collins discussed them as follows:

1. Review animal program.
2. Inspect animal facilities.
3. Report results of 1 and 2 to the institutional official (IO).
   According to Collins, “These three functions constitute the mandated semianual evaluation of an animal program…. In fact for many institutions, these three functions and protocol review account for the majority of an IACUC’s time.”
4. Review animal care and use concerns.
5. Make recommendations to the IO about any aspect of an animal program, facilities, or personnel training.

   Functions four and five, Collins said, “have no set schedule, and, depending on your program, may occur infrequently. Although we do hope that in the spirit of number five, you have an ongoing dialogue with your IO about the status of your animal program.”
6. Review and approve, require modifications in (to secure approval), or withhold approval of proposed animal activities.
7. Review, require modifications to approve, or withhold approval of proposed significant changes to ongoing animal activities.
   “Numbers 6 and 7, typically, are referred to as protocol review and are viewed by many, mistakenly, as the only thing that an IACUC does. Note that 6 refers to the review of the initial protocol and 7 refers to proposed changes to an already approved protocol. In both of these functions, the IACUC is charged with requiring modifications to proposed animal activities, if needed, for approval,” Collins said.
8. Suspend an activity involving animals.

   The last function, according to Collins, is critical, “Although it is difficult, it is important that each member of the IACUC be willing to vote to suspend an activity
position at your institution to support a ‘culture of compliance’ that will facilitate the IACUC process.”

**Methods of Continuing Review Vary**

Under the PHS policy, an IACUC is required to conduct “continuing review of each previously approved, ongoing activity covered by this policy at appropriate intervals as determined by the IACUC, including complete review...at least once every three years.”

“When the policy was first enacted, many institutions interpreted this to mean simply that protocols had to be renewed every three years. While that is true, standard practice has evolved to a process of ongoing review throughout the life of an approved activity, thus providing the IACUC with ongoing feedback,” Collins said. Collins added, however, that the requirement to conduct continuing review does not mean a formal post-approval monitoring, or PAM, process needs to be established, nor does additional staff necessarily need to be hired. A formal PAM program is “merely only one way” for an institution to achieve compliance, He said.

Collins discussed examples of less-formal post-approval monitoring activities. If the answer is “yes” to any of the following at an institution, according to Collins, “you are conducting PAM”:

- Does your IACUC conduct annual protocol review?
- Does it track unexpected animal death or disease?
- Does it keep an eye on problem labs?
- Does the IACUC receive veterinary reports?
- Does it report noncompliance to OLAW?

**Relationship With IO Is Crucial**

Throughout his comments, Collins stressed the need for the IO to be involved in relevant IACUC activities and to have a good working relationship with the IACUC. He suggested giving the IO a copy of the PHS animal care policy (see http://grants.nih.gov/grants/olaw/references/phspol.htm). Collins also “strongly encouraged” IACUCs to help IOs to “do their own mini-inspection and then compare their impression with the most recent report they received from the IACUC about that same location. Hopefully, they will agree with your IACUC’s assessment.”

Semiannual reports provide another opportunity for IO interaction. “Do you and your IO get an accurate sense of your program from each semiannual report?” Collins asked. “How does your IO follow up on questions or concerns raised in the report? Things work best if there is a partnership between the IO and your IACUC. Does your IO meet on a regular basis with the IACUC chair or member of the IACUC staff?” Regarding the reports, Collins also noted that deficiencies described in a semiannual inspection should have a “reasonable, specific plan and schedule” for correcting each one. “Remember that it is up to the IO and the IACUC to determine the seriousness of all noted deficiencies,” he said. Collins also pointed out that such reports should include “minority opinions.”
Collins described another instance where the IACUC must work closely with the IO. “If the IACUC suspends an activity involving animals, the IO, in consultation with the IACUC, shall review the reasons for the suspension, take appropriate corrective action and report the action with a full explanation to OLAW,” Collins said, adding that “this is one of two IACUC functions that involve both the IO and the IACUC. The other is when, together, they determine if a deficiency is significant.” While IACUCs have the “responsibility” to suspend activities, this is shared with the IO, Collins said. The IO “may also do so, and it is very important that everyone understand that veterinarians have a similar authority to halt an activity if it is to protect the health or safety of animals,” Collins said.

Compliance Resources Are Available
After the presentation part of the webinar, Susan Silk answered stakeholders’ questions. When asked about common features of a good animal care and use program, Silk cited the important role of education in fostering a “culture of compliance” at an institution, the same term used by Collins.

Training — of investigators, research staff, animal facility personnel, IACUC members — such that everyone understands the system and what is expected of them is essential “to an effective, robust program,” Silk said. Another questioner sought assistance with disaster planning. Silk said the plan should address both animals and people. “Animal program personnel, such as the vet or facility manager, should be included in organizational planning. Plans should include consideration of immediate animal care and relocation, saving valuable research, humane disposition of animals — should that become necessary — and preservation of valuable strains through cryopreservation,” Silk said.

¶3320.9 Ensure Meeting Costs Are ‘Audit-Proof’

AIS editors

When an inspector general audit report detailing excessive spending of taxpayer funds by staff from the U.S. General Services Administration at a location with a reputation for less-than-serious business — Las Vegas — hit the media in early 2012, the fallout for the agency was swift and unfortunate. As a result, every out-of-town meeting conducted with government funds seemed vulnerable, despite the fact that such meetings it is allowable to charge the costs of meetings and conferences to federal grants where “the primary purpose is the dissemination of technical information” and the costs of “training provided for employee development,” according to the federal cost principles (Circular A-21 for colleges and universities).

Many savvy grantees and subgrantees recognized long ago that the line drawn by the federal government between allowable meeting, conference, and training expenses, and unallowable entertainment in grant-funded activities isn’t the clearest — so they exercise the kind of prudent judgment that was apparently lacking on the part of certain officials at GSA. They do this by reviewing the purposes and agendas of the sessions that their staffs seek to attend — and the locations — and by documenting how these activities relate to and benefit the grants. They also do it by opting for reasonable lower cost alternatives like teleconferencing and webinars and considering how the expenses associated with those events will look to a skeptical auditor.

A recent audit by NSF’s Office of Inspector General of the foundation’s practices regarding staff retreats could offer additional guidance in this area (www.nsf.gov/oig/12-2-009.pdf.). OIG reviewed nine NSF staff retreats and found “several areas in which NSF could improve internal control to better ensure cost containment and compliance with applicable standards.” The nine sampled retreats were selected from 95 held in fiscal years 2010 and 2011.

OIG found “a lack of support to ensure that retreat sites selected were the most cost effective as required by the Federal Travel Regulation (FTR)” and “because NSF had not set a standard for how much should be spent on refreshments at retreats, the amount that could be spent varied across the agency.” OIG recommended that NSF develop a policy incorporating the relevant FTR requirements that indicate a basis “for clear expectations of justification of cost, reasonableness of spending, and sufficiency of management oversight” and that it “reevaluate” holding staff retreats outside the Washington area, where NSF is headquartered.

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§3320.10 NIH Domestic Awards to Transition to Payment Management System Subaccounts in FY 2014 and FY 2015
National Institutes of Health

Notice Number: NOT-OD-13-120
Key Dates: Release Date: September 26, 2013

Purpose
This guide notice alerts grantees to a change in the implementation timeline, previously announced in NOT-OD-13-112, for the NIH transition to new U.S. Department of Health and Human Services (HHS) payment policies for grant awards and use of Payment Management System (PMS) subaccounts.

NIH will transition all award payments to the PMS subaccounts by the end of FY 2015. To help minimize grantee burden for the transition in FY 2014, NIH will only establish PMS subaccounts for domestic awards that have new document numbers. However, in response to feedback from the grantee community, NIH has delayed the implementation for non-competing continuation awards to October 1, 2014, to allow grantees a year to prepare their systems to accommodate the changes.

This Guide Notice only applies to domestic awards. NIH transitioned the payment of grant awards to foreign institutions to PMS subaccounts throughout FY 2013; see NOT-OD-12-139 and NOT-OD-13-019. Also, see companion Notice NOT-OD-13-111 on transitioning payment of Federal Institutions and Individual Fellowships at Federal and Foreign Institutions to PMS subaccounts.

Background
Most payments for NIH domestic awards are currently made via pooled accounts in PMS, which is a centralized grants payment and cash management system operated by the Division of Payment Management (DPM) HHS.

Payments for NIH awards to Federal institutions, Federal Fellows and Foreign Fellows are currently made directly by the Office of Financial Management (OFM), NIH.

Revised Implementation Timeline
The transition of all NIH awards to PMS subaccounts is anticipated to take place in FY14 and FY15.

FY2014 Implementation Plans for Awards with New Document Numbers
Between October 1, 2013 and September 30, 2014, NIH will transition payment for all domestic awards with new document numbers (i.e., Type 1, Type 2, Type 4, Type 6, Type 7, and Type 9) from PMS pooled accounts (G accounts) to PMS subaccounts (P subaccounts). For these types of awards, PMS will establish subaccounts for each NIH award made on or after October 1, 2013. All subsequent non-competing continuation awards will be issued in subaccounts.
**Anticipated Implementation Plans in FY2014 and FY2015 for Type 3 Awards**

Please be aware that competitive revisions/supplements (Type 3s) issued to domestic awards in FY 2014 and FY 2015, will be issued in the same account as the parent award. If the parent award is in the pooled account at the time the Type 3 is issued, the Type 3 will be in the pooled account too. If the parent award was issued in a P subaccount at the time the Type 3 is issued, the Type 3 will also be in the P subaccount account.

**Anticipated FY2015 Implementation Plans for All Other Domestic Awards**

Between October 1, 2014 and September 30, 2015, NIH will transition payment for all continuing domestic awards (i.e., Type 5 and Type 8) that have not yet transitioned to subaccounts from PMS pooled accounts (G accounts) to PMS subaccounts (P subaccounts). For these types of awards, PMS will establish subaccounts for each NIH award made on or after October 1, 2014.

For domestic grants with a non-competing continuation year of funding in fiscal year (FY) 2015 (October 1, 2014 – September 30, 2015), NIH will use a technical process to shift the funding from PMS G accounts to PMS P subaccounts by issuing all FY 2015 non-competing continuation awards that have not yet transitioned to subaccounts as Type 4 awards (funded extension awards). This means that all domestic Type 5 awards (non-competing continuation awards) and Type 8 awards (non-competing continuation awards with a change of awarding Institute or Center), will be issued as Type 4s during the transition period. This enables NIH to separately track obligations and payments for grants that span the Federal FYs 2014 and 2015. In addition to changing the record Type and the document number for the FY 2015 award, NIH will change the project period end date of the FY 2014 award when the FY 2015 award is issued. The project period end date will be changed to the budget period end date. This effectively breaks the single competitive segment into two shorter “competitive segments.” The change will be reflected in the eRA Commons; however, NIH will not issue a revised Notice of Award (NoA) for the FY 2014 award. Therefore, the FY 2014 award becomes the final year of the first “competitive segment” and requires final Federal Financial Report (FFR) expenditure data. If the award is under Streamlined Non-competing Award Process (SNAP), the grantee will be required to submit FFR expenditure data that covers the project period from the original start date through the new project period end date.

NIH will make this transition as seamless as possible for grantees and NIH staff. Records for non-competing continuation progress reports (Type 5s), or in rare instances Type 8s, that have not yet transitioned to subaccounts will be converted to Type 4s. The conversion will be processed internally by NIH. There will be no change to the due dates, submission, or review of progress reports for domestic awards for FY 2015.

Please see below for procedural changes in carryover of funds for non-competing continuation awards issued in FY 2015.

Non-competing continuation progress reports (Type 5s), or in rare instances Type 8s, that were converted to Type 4s to accommodate the change in method of payment from the pooled accounting to subaccounts, require a final FFR for the prior year(s) of the competitive segment before any carryover funds would be available for drawdown in the PMS. However, this requirement does not change the carryover authority listed in Section III of the NoA. If the award was issued with automatic carryover authority, OFM will automatically authorize the carryover in the PMS P subaccount equal to the amount of unobligated balance reported on the FFR.* If the award was issued without carryover authority, OFM will automatically transfer the unobligated balance reported on the FFR to the PMS P subaccount; however, the grantee will still be required to submit a prior approval request to use carryover funds as detailed in the NIH Grants Policy Statement, Section 8.1.1.1. If the request is approved, a revised NoA reflecting the approved carryover amount will be issued and the authorized amount will be reflected in PMS. Failure to submit FFR expenditure data in a timely manner may affect future funding.

*In accordance with existing policy, the GMO will review unobligated balances in excess of 25 percent of the total authorized amount for the budget period and may request additional information from the grantee. If the GMO determines that some or all of the unobligated funds are not necessary to complete the project, the GMO may restrict the grantee’s authority to automatically carry over unobligated balances in the future, use the balance to reduce or offset NIH funding for a subsequent budget period, or use a combination of these actions. The GMO’s decision about the disposition of the reported unobligated balance will be reflected in the terms and conditions of the NoA.

An FFR to report expenditure information is not required for Kirschstein-NRSA individual fellowship awards.

Change in Processing of Funds Requested for Awards in PMS Subaccounts that are 90 days Beyond the Project Period End Date

When a federal grant expires, recipients can only use remaining grant funds to liquidate expenses incurred during the performance period. Federal grants management policy specifies that within 90 days of the project period end date the grant recipient must submit its final financial report for the grant, unless the awarding agency extends the project period end date or the reporting period due date. See NIH Grants Policy Statement Section 8.6 for more information on the grantee responsibilities for timely closeout is a grantee responsibility.

In an effort to promote more timely financial closeout of awards, PMS will now hold payment requests for funds in subaccounts for awards that are 90 days or more beyond the project period end date. Funds requests for these awards will not be processed unless, and until, the awarding Agency has approved the payment request.
**Frequently Asked Questions**

NIH will post answers to frequently asked questions on the transition to PMS sub-accounts on the following site: [http://grants.nih.gov/grants/frequent_questions.htm](http://grants.nih.gov/grants/frequent_questions.htm) under the Other Policies/Resource heading, Payment (PMS Subaccounts).

**Inquiries**

Please direct all inquiries to:

- Division of Grants Policy
- Office of Policy for Extramural Research Administration
- Office of Extramural Research
- National Institutes of Health
- Telephone: 301-435-0949
- Email: GrantsPolicy@od.nih.gov

National Science Foundation ARRA Recipient Reporting Frequently Asked Questions

National Science Foundation

March 10, 2014

1. Is ARRA reporting finished?

Recipient reporting for Recovery Act awards has been repealed by Congress as of February 1, 2014. Therefore, the January 2014 reporting cycle was the last time recipients will be required to report on their ARRA awards.

For more information about the completion of Section 1512 ARRA recipient reporting, please see the End of Recipient Reporting FAQs posted on the FederalReporting.gov home page.

2. My NSF ARRA award has not expired. Will NSF modify the award to remove the ARRA reporting requirements in the Terms and Conditions? Are there now other reporting requirements for my ARRA award?

Yes, NSF is amending ARRA awards which have not yet expired, to remove the ARRA reporting requirements from the award Terms and Conditions. Recipients should follow the Terms and Conditions of the award, including complying with all reporting requirements.

3. What is the timeline for the end of Section 1512 ARRA reporting?

- **February 1 - March 19, 11:59 P.M. Eastern Time**
  - Agencies and recipients review reports and make changes and corrections as needed. If you have questions, please review the End of Recipient Reporting FAQs on the FederalReporting.gov home page first, as you might find your answers there. If you still have questions, email the Help Desk at FederalReportingHelpDesk@ratb.gov.
  - Agencies and recipients can continue to submit Automated Data Change requests. (See Chapter 16 of the FederalReporting.gov User Guide for instructions.)

- **March 20**
  - The extended Quality Assurance period ends for recipients and agencies.
  - Recipients will not be able to login to Federal Reporting.gov.
  - The Help Desk closes.

- **May 1**
  - The final Recipient Data will be posted on Recovery.gov.

4. When can I file a final report on FederalReporting.gov for an ARRA award?

A project is considered final for ARRA reporting purposes when the following requirements are met:

- All ARRA funds associated with the award have been expended at the prime
recipient level.

- All or nearly all ARRA funds associated with the award have been invoiced and received. Per Office of Management and Budget (OMB) guidance, in instances where expenditures are reimbursed to recipients and invoices/receipts lag expenditures, a project may be marked as final when all funds have been expended, 75% or more of the funds awarded have been invoiced and received, and the project status is “Fully Completed.”

- No additional jobs will be funded.

- The project status is complete per agency requirements and/or performance measures.

- The project status is marked as “Fully Completed.”

Please note for NSF ARRA awards, recipients have 90 days after the expiration date of the award to liquidate all obligations incurred, draw down funds through ACM$, and submit all required reports. Please refer to the FAQs for Closeout of ARRA Awards for additional information about closure of your ARRA award.

5. What are the final report requirements? For a report to be considered final per OMB guidance:

The Final Report indicator must be “Yes,”

- The Project Status must be “Fully Completed,” and

- The Amount of ARRA Funds Received and Amount of ARRA Expenditure must match the award amount.

- In instances where the final prime recipient expenditures are less than the award amount listed on the report due to an amendment in the original agreement or if the project came in under budget, the recipient must provide a description in the “Quarterly Activities/Project Description for Prime and Sub-recipients” field explaining why the final amount in the “Total Federal Amount of ARRA Expenditure” field does not equal the amount in the “Amount of Award” field, and confirming that no more funds will be expended by the prime recipient.

6. Should I use the award amount from the NSF Award Notice for the “Amount of Award” field on my ARRA report?

No. For the “Amount of Award” field, recipients should enter the value from the field entitled “Funds Obligated to Date” in Research.gov. Any non-ARRA supplemental funding should not be included in award amount totals when completing ARRA quarterly reports.

7. How do I update my Central Contractor Registration (CCR)?

The CCR system was migrated into the comprehensive System for Award Management (SAM). The information previously maintained in CCR is contained within the Entity Management area in SAM, and users will need to create a new username and password to access the system, as the previous CCR password will not work in
SAM. The entire process to reactivate/update your CCR registration in SAM will require at least 3-5 days, and there is no fee to register at SAM.gov. For additional CCR assistance, please contact the SAM help desk at www.fsd.gov.

8. Why is it important to maintain current CCR and DUNS registration information?

It is the recipient’s responsibility to ensure that their CCR information is up-to-date, and that their registration is active and will remain active throughout the reporting cycle. If the registration expires or if the recipient’s CCR account has not been updated in SAM, the recipient will not be able to access FederalReporting.gov through March 19, 2014, unless the registration is reinstated. Maintaining current Points of Contact in the CCR record will ensure that CCR renewal reminders are received by the appropriate person(s) at the recipient organization.

It is also the recipient’s responsibility to ensure that their DUNS number and entity record is accurate and active with Dun and Bradstreet (D&B). While DUNS numbers do not expire, D&B does conduct routine and continuous data maintenance and outreach to verify operations at a location. When operations cannot be verified for a particular DUNS number, D&B may flag the DUNS number as “inactive,” which could interfere with successful reporting. In order to lookup, review, or modify a record at D&B, recipients may utilize the self-service webform at http://fedgov.dnb.com/webform. This application allows a recipient to look up their DUNS number, review the data on file, request changes if necessary, or request a new DUNS number if one does not already exist. Recipients can call (866) 705-5711 to verify that a DUNS number is active and to confirm other details about their entity.

9. To whom should I direct further questions regarding ARRA recipient reporting?

Any questions regarding ARRA recipient reporting may be directed to the NSF ARRA Recipient Reporting Team at NSFARRAReviewer@nsf.gov. NSF-specific ARRA reporting guidance is also available on our Recovery Act website at http://www.nsf.gov/recovery.
13320.12 NIH Opens Research Performance Progress Reports
National Institutes of Health

Notice Number: NOT-OD-14-064
Key Dates
Release Date: March 4, 2014
Related Announcements
NOT-OD-14-026; NOT-OD-13-113; NOT-OD-13-035; NOT-OD-13-061; NOT-OD-12-083
Issued by
National Institutes of Health (NIH)

Purpose
The National Institutes of Health (NIH) will open the Research Performance Progress Report (RPPR) for all type 5 non-SNAP progress reports following the April 24, 2014, eRA release.

Background
NIH requires use of the RPPR module to submit progress reports for Streamlined Non-competing Award Process (SNAP), fellowship, and multi-year funded awards. NIH is continuing efforts to implement the RPPR module for non-SNAP awards; please see details below.

RPPR for Non-SNAP Progress Reports
Federal Demonstration Partnership (FDP) institutions currently may opt to submit type 5 non-SNAP progress reports using the RPPR and NIH encourages FDP institutions to continue to do so.

On April 25, 2014, NIH will expand to all institutions the ability to submit type 5 non-SNAP progress reports using the RPPR. NIH encourages all institutions to use the RPPR to submit type 5 non-SNAP progress reports when access is available. While non-FDP institutions cannot submit type 5 non-SNAP progress reports using the RPPR until April 25, 2014, for institutions interested in learning more about non-SNAP RPPRs, an archive of a recent training session is available on the NIH RPPR webpage. Beginning on April 25, 2014, all institutions may use the RPPR for type 5 non-SNAP progress reports.

Non-SNAP progress reports not submitted using the RPPR must be submitted using the PHS 2590.

NIH anticipates requiring all grantee institutions to use the RPPR for non-SNAP progress reports beginning on October 17, 2014; however, a separate Guide Notice announcing the requirement will be issued on a future date. Note also, that NIH continues development of the RPPR for final progress reports and for administrative extensions (Type 4s; e.g., SBIR/STTR Fast-Track Phase II application). NIH will update the community as progress is made.

Additional information and resources on the RPPR, including the current RPPR
Instruction Guide and training archives, can be found at: http://grants.nih.gov/grants/rppr/.

Inquiries

General questions concerning using the eRA Commons and RPPR functionality should be directed to the eRA Commons Helpdesk at:

- eRA Commons Help Desk
- Web: http://ithelpdesk.nih.gov/eRA/ (Preferred method of contact)
- Toll-free: 1-866-504-9552
- Phone: 301-402-7469
- TTY: 301-451-5939

General inquires about this Notice may be directed to:

- Division of Grants Policy
- Office of Policy for Extramural Research Administration
- Phone: 301-435-0938
- Fax: 301-435-3059
- Email: GrantsPolicy@od.nih.gov

See more at: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-064.html#sthash.n8vVpDE0.dpuf
13320.13 Revised Timeline for Administrative Changes to NIH Domestic Awards to Transition to Payment Management System Subaccounts

National Institutes of Health

Notice Number: NOT-OD-14-103

Key Dates
Release Date: July 11, 2014
Related Announcements
NOT-OD-14-093
NOT-OD-13-120
NOT-OD-13-112
NOT-OD-13-111
NOT-OD-13-079
NOT-OD-12-139

Purpose
This Notice alerts grantees to a change in the implementation timeline, previously announced in NOT-OD-13-120 and NOT-OD-14-093, for the NIH transition to new U.S. Department of Health and Human Services (HHS) payment policies for domestic, non-competing continuation awards and use of Payment Management System (PMS) subaccounts. It also announces a change in how competitive revisions/administrative supplements (Type-3s) awards will be processed.

This Notice only applies to domestic non-competing continuation awards that have not yet transitioned to PMS subaccounts. In response to critical feedback from the grantee community, NIH requested an amendment to its subaccount implementation plan to delay the transition of domestic, non-competing continuation awards to PMS subaccounts for an additional year; e.g., now beginning October 1, 2015. HHS’s Office of the Assistant Secretary for Financial Resources recently approved the request. This additional time is provided to allow grantees to prepare their systems to accommodate the changes. Grantees with inadequate systems in place to appropriately manage this transition by October 1, 2015, may be unable to appropriately access PMS accounts and risk losing their ability to draw down funding. Grantees are advised that there will be no additional implementation delays considered and no exceptions granted to the deadline. As of October 1, 2015, NIH will utilize only subaccounts for awarding grant funds. Every grant that is awarded funding in FY 2016 (whether it be in the first, second, third or fourth quarter of FY 2016) will be in a subaccount.

NIH will continue transitioning payment of grant awards with new document numbers to domestic institutions to PMS subaccounts in FY 2015 as announced in Notice NOT-OD-13-120. The administrative changes announced in NOT-OD-14-093 will now apply to the transition that will occur between October 1, 2015 and September 30, 2016. This Notice reiterates those administrative changes for non-competing, continuation awards and highlights the revised implementation timelines and T-3 award process for all domestic awards.
Revised Implementation Timeline

The transition of all NIH awards to PMS subaccounts is anticipated to be complete by September 30, 2016.

Implementation for Domestic Awards with New Document Numbers

NIH will continue to transition payment for all domestic awards with new document numbers (i.e., Type 1, Type 2, Type 4, Type 6, Type 7, and Type 9) from PMS pooled accounts (G accounts) to PMS subaccounts (P subaccounts). For these types of awards, PMS will establish subaccounts for each NIH award made on or after October 1, 2013. All subsequent non-competing continuation awards to these grants will also be issued in subaccounts.

Implementation for Domestic Type 3 Awards

Please be aware that beginning with awards issued on/after October 1, 2015, competitive revisions/administrative supplements (Type 3s) issued to domestic awards, will now also be issued in a P subaccount. This is a change from the previously announced plan and is regardless of whether the parent grant is still in PMS pooled accounts (G accounts) or has transitioned to PMS subaccounts (P subaccounts).

Implementation for Domestic, Non-Competing Continuation Awards

Implementation for domestic, non-competing awards has been delayed by one fiscal year; this implementation will now occur between October 1, 2015 and September 30, 2016. NIH will transition payment for all continuing domestic awards (i.e., Type 5 and Type 8) that have not yet transitioned to subaccounts from PMS pooled accounts (G accounts) to PMS subaccounts (P subaccounts). For these types of awards, PMS will establish subaccounts for each NIH award made on or after October 1, 2015.

◆ For domestic grants with a non-competing continuation year of funding in fiscal year (FY) 2016 (October 1, 2015 – September 30, 2016), NIH will use a technical process to shift the funding from PMS G accounts to PMS P subaccounts by issuing all FY 2016 non-competing continuation awards that have not yet transitioned to subaccounts as Type 4 awards (funded extension awards). This means that all domestic Type 5 awards (non-competing continuation awards) and Type 8 awards (non-competing continuation awards with a change of awarding Institute or Center), will be issued as Type 4s during the transition period.

◆ In addition to changing the record Type and the document number for the FY 2016 award, NIH will change the project period end date of the FY 2015 award when the FY 2016 award is issued. The project period end date will be changed to the budget period end date. This effectively breaks the single competitive segment into two shorter “administrative segments.” The change will be reflected in the eRA Commons; however, NIH will not issue a revised Notice of Award (NoA) for the FY 2015 award.

◆ Therefore, the FY 2015 award becomes the final year of the first “administrative segment” and requires Federal Financial Report (FFR) expenditure data, which is
Supplementary Material

Applicable Policies for Non-Competing Continuation Awards

- Due Date for Subaccount Transitional FFR: the due date for Subaccount Transitional FFR expenditure reports is no later than 90 days after the end of the calendar quarter in which the budget period ended.

- Unliquidated Obligations on the Subaccount Transitional FFR: if there are unliquidated obligations at the end of the first “administratively shortened” competitive segment, these may be reported on the subaccount transitional FFR expenditure data report.

- Subaccount Transitional FFR for converted SNAP awards: If the award is under Streamlined Non-competing Award Process (SNAP), the grantee will be required to submit subaccount transitional FFR expenditure data that covers the project period from the original start date through the new project period end date.

- Due Date for Progress Reports: There will be no change to the due dates, submission, or review of progress reports for domestic awards for FY 2016.

Please see below for procedural changes in carryover of funds for non-competing continuation awards issued in FY 2016.

Change in Process to Carryover Funds and Federal Financial Reports for Domestic Non-Competing Continuation Awards during FY 2015 (October 1, 2015 – September 30, 2016)

Non-competing continuation progress reports (Type 5s), or in rare instances Type 8s, that were converted to Type 4s to accommodate the change in method of payment from the pooled accounting to subaccounts, require a final FFR for the prior year(s) of the competitive segment before any carryover funds would be available for drawdown in the PMS. However, this requirement does not change the carryover authority listed in Section III of the NoA. If the award was issued with automatic carryover authority, OFM will automatically authorize the carryover in the PMS P subaccount equal to the amount of unobligated balance reported on the FFR.* If the award was issued without carryover authority, OFM will automatically transfer the unobligated balance reported on the FFR to the PMS P subaccount; however, the grantee will still be required to submit a prior approval request to use carryover funds as detailed in the NIH Grants Policy Statement, Section 8.1.1.1. If the request is approved, a revised NoA reflecting the approved carryover amount will be issued and the authorized amount will be reflected in PMS. Failure to submit FFR expenditure data in a timely manner may affect future funding.

*In accordance with existing policy, the GMO will review unobligated balances in excess of 25 percent of the total authorized amount for the budget period and may request additional information from the grantee. If the GMO determines that
some or all of the unobligated funds are not necessary to complete the project, the GMO may restrict the grantee’s authority to automatically carry over unobligated balances in the future, use the balance to reduce or offset NIH funding for a subsequent budget period, or use a combination of these actions. The GMO’s decision about the disposition of the reported unobligated balance will be reflected in the terms and conditions of the NoA.

**Frequently Asked Questions**

NIH will post updated answers to frequently asked questions on the transition to PMS subaccounts on the following site: http://grants.nih.gov/grants/payment/faqs.htm based on this revised timeline.

**Inquiries**

Please direct all inquiries to:
Division of Grants Policy
Office of Policy for Extramural Research Administration
Office of Extramural Research
National Institutes of Health
Telephone: 301-435-0949
Email: GrantsPolicy@od.nih.gov

See more at: http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-103.html#sthash.hWknSq6H.d
3320.14 Reminder of Timeline for Administrative Changes to NIH Domestic Awards to Transition to Payment Management System Subaccounts

National Institutes of Health

Notice Number: NOT-OD-15-105
Key Dates
Release Date: May 28, 2015
Related Announcements
NOT-OD-14-103
NOT-OD-14-093
NOT-OD-13-120
NOT-OD-13-112
NOT-OD-13-111
NOT-OD-13-079
NOT-OD-12-139

Issued by National Institutes of Health (NIH)

Purpose
This Notice is intended to remind and reiterate the implementation timeline, previously announced in NOT-OD-14-103, for the NIH transition to new U.S. Department of Health and Human Services (HHS) payment policies for domestic, non-competing continuation awards and use of Payment Management System (PMS) subaccounts.

Implementation Timeline Reminder
As of October 1, 2015, NIH will utilize only subaccounts for awarding grant funds. Every grant that is awarded funding in FY 2016 (whether it be in the first, second, third or fourth quarter of FY 2016) will be in a subaccount. The transition of all NIH awards to PMS subaccounts will be complete by September 30, 2016. Grantees with inadequate systems in place to appropriately manage this transition by October 1, 2015, may be unable to appropriately access PMS accounts and risk losing their ability to draw down funding. Grantees are advised that there will be no additional implementation delays considered and no exceptions granted to the deadline.

Applicable Policies for Non-Competing Continuation Awards
A Subaccount Transitional FFR for all intent and purpose is equated to an annual FFR. Applicable policies for non-competing continuation awards include:

Due Date for Subaccount Transitional FFR: the due date for Subaccount Transitional FFR expenditure reports is no later than 90 days after the end of the calendar quarter in which the budget period ended.

Unliquidated Obligations on the Subaccount Transitional FFR: If there are unliquidated obligations at the end of the first “administratively shortened” competi-
tive segment, these may be reported on the subaccount transitional FFR expenditure data report.

**Subaccount Transitional FFR for converted SNAP awards:** If the award is under Streamlined Non-competing Award Process (SNAP), the grantee will be required to submit subaccount transitional FFR expenditure data that covers the project period from the original start date through the new project period end date.

**Due Date for Progress Reports:** There will be no change to the due dates, submission, or review of progress reports for domestic awards for FY 2016.

Recipients should use the SF-425 as they would for an annual FFR and mark “annual” in box 6. Additionally, grantees should enter “Subaccount Transitional FFR” in box 12.

Please see below for procedural changes in carryover of funds for non-competing continuation awards issued in FY 2016.

Carryover Funds and Federal Financial Reports for Domestic Non-Competing Continuation Awards during FY 2015 (October 1, 2015 – September 30, 2016)

The requirement to submit the Subaccount Transitional FFR for non-competing continuation awards is to ensure that approved balances will be transferred to the PMS P subaccount and made available to the grantee. This requirement does not change the carryover authority listed in Section III of the NoA. If the award was issued with automatic carryover authority, OFM will automatically authorize the carryover in the PMS P subaccount equal to the amount of unobligated balance reported on the FFR. If the award was issued without carryover authority, OFM will automatically transfer the unobligated balance reported on the FFR to the PMS P subaccount; however, the grantee will still be required to submit a prior approval request to use carryover funds as detailed in the NIH Grants Policy Statement, Section 8.1.1.1. Failure to submit this Subaccount Transitional FFR will affect the availability of those and future funds.

**Frequently Asked Questions**

NIH has posted updated answers to frequently asked questions on the transition to PMS subaccounts on the following site: http://grants.nih.gov/grants/payment/faqs.htm based on this implementation timeline.

Preparing for the Transition to NIH Subaccounts
James D. Luther, Duke University

Summary
Over the past several years and particularly with the rollout of the Uniform Guidance (Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards), there is renewed focus on timely financial reporting. Many federal agencies are implementing policies and practices to enforce timely submission of final project reporting and associated draw down of funds. Similarly, the focus on programmatic reporting is increasing as well. Universities vary greatly on their readiness to meet this enforcement; for those that are prepared, are adequately staffed, and have adequate IT and reporting transparency to manage this enforcement, the impact will likely be minimal. For others, the impact could be broad and significant and include financial risk, compliance risk, and disruption of business processes at both the departmental and central level and research in the lab. To adapt, these universities may need to restructure and revise core business practices for management of sponsored projects, and revise or create policies, technology solutions, training and monitoring. And it is likely that this will have to happen in a compressed timeframe. There has been an escalation in communication from federal agencies that confirms their commitment to closeout requirements.

This article will provide some context on what to expect as the Uniform Guidance (UG) drives even more enforcement, the background on the renewed enforcement, and one institution’s technology and business process initiatives that are underway to prepare.

Background
While previous decades have seen escalating compliance expectations imposed on universities, recent directives from federal sponsors regarding timely closeout and award management have significantly increased pressure on universities. What is the impetus for this increased concern? Universities are facing added pressure from federal agencies in response to the Government Accounting Office (GAO) reports and the Offices of Inspector General directing higher levels of enforcement for award management. Most notably was the July 2012 GAO report entitled Improving the Timeliness of Grant Closeouts by Federal Agencies and Other Grants Management Challenges in federally funded projects that had not been appropriately closed. The GAO cited some projects that were as late as 5-10 years past closing dates. In tight budget times, the potential of so many federal dollars remaining encumbered and unspent raised concerns across all agencies, and even rose to the level of congressional discussion. Offices of Inspector General began to issue strong directives to the agencies regarding improvement of closeout processes and fundamental award management. In response, many federal agencies are currently reviewing their grantee oversight models and considering methods to increase levels of transparen-

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1 This article is reprinted from NCURA Magazine, Volume XLVI, No. 4, August 2014. It is used with permission of the publisher.
cy and accountability. For example, one agency’s approach has been to implement new reporting requirements, such as subaccount reporting to provide for increased transparency and reimbursement control.

This single change alone — transition to sub-accounting — may require institutions to devote extensive resources to significant technology support, changes in business process, and additional personnel.

Does this mean that federal agencies may potentially begin to deny reimbursement on projects that do not observe a timely 90 day close? It appears that this will indeed be the case, as agency enforcement of this requirement is more strictly imposed.

With a long history of productive agency/institutional partnership, all parties are committed to a timely and effective closeout; however, there may be obstacles within a university that can challenge this process. Some are easily surmountable, but others may have complex facets that require greater levels of coordination, re-sourcing, and internal policy change:

◆ Timing issues related to resource workload management (timely closeouts may be a challenge): The conflicting demands on institutional grant managers may be significant and require difficult prioritization among proposal submission, appropriate fiscal management of active projects, and closeout, each task with finite deadlines.

◆ Complexities of managing subrecipients: International subawardees, or awards that have more complex terms and conditions may pose additional problems in achieving a timely close.

◆ Institutions may struggle with timing issues related to postings that are entirely driven by the institution’s general ledger or payroll posting frequency which may only occur once per month.

◆ Late postings from service centers, vendors, and service providers may also need to be addressed.

The closeout process is complex and can be demanding if adequate personnel and system support are not readily available. Within 90 days, institutions must complete a final financial reconciliation of project expenses, ensure that all programmatic and financial requirements and documentation standards of subawards have been met, verify that effort has been appropriately managed and documented, close down any standing orders, outstanding encumbrances, remove all payroll assigned to the project and manage a final financial reconciliation. The issue is further exacerbated by limitations on resources dedicated to closeout and the variety and inconsistency of project closeout dates.

What, then, are the risks to the institution?

◆ Financial risk: universities incur a cost but due to other challenges are not able to draw down funds for reimbursement in time;

◆ Compliance risk: late financial and programmatic reports
Business disruption risk: pressure research administrators and principle investigators who are challenged to manage competing priorities may ultimately lead to reduced quality of research.

What role does the new Uniform Guidance play in addressing this issue?

OMB A-110 has long had a requirement for timely reporting but with expanded oversight and attention, the UG is reinforcing and clarifying the requirements. Section § 200.343 of the Uniform Guidance is very clear and states:

(a) The non-Federal entity must submit, no later than 90 calendar days after the end date of the period of performance, all financial, performance, and other reports as required by or the terms and conditions of the Federal award. The Federal awarding agency or pass-through entity may approve extensions when requested by the non-Federal entity.

(b) Unless the Federal awarding agency or pass-through entity authorizes an extension, a non-Federal entity must liquidate all obligations incurred under the Federal award not later than 90 calendar days after the end date of the period of performance as specified in the terms and conditions of the Federal award.

(c) The Federal awarding agency or pass-through entity should complete all closeout actions for Federal awards no later than one year after receipt and acceptance of all required final reports.

To summarize, the guidance reaffirms that all final reports (financial, performance, and other) and liquidation of obligations must occur within 90 days of the end date.

“Transparency, Enforcement and the Cash”: Subaccount Reporting

In response to the GAO report and audit pressure, many agencies are increasing their enforcement of these deadlines in advance of the implementation of the UG. Perhaps most compelling is the NIH announcement of a sweeping change to subaccounting financial reporting. While NSF had previously adopted the requirement that federal drawdowns must be done by individually funded project accounting, this has not previously been the practice at NIH. NIH announced its plans to transition to subaccounting in September, 2013 but delayed the transition start to 10/1/14. Other HHS agencies like HRSA are also communicating their planned enforcement.

Changing to subaccounting provides greater transparency as to the specifics of individual project financial accountability, and also enables the identification of late charging on projects past their closing end date. For institutions that have long relied on a consolidated drawdown process, this change is significant. The transition may require substantial technology support, institution-wide change in business process, and considerable drain on personnel resources. Aside from NSF and NIH, other federal agencies differ in their ability to readily enforce or support this change in financial systems, potentially creating a bifurcated business process at the institutional level.

Depending on the size of an institution’s portfolio, the transition to subaccount-
ing can be a significant business process change that may represent a >30 percent increase in annual FFR submission. Additionally, institutions may have to develop technology solutions to support a code-by-code draw process and may need to significantly increase their draws from 1-5 time/month to almost daily to ensure that there are no inadvertent internal timing issues that would cause the institution to miss the 90 day deadline.

**Duke University’s Approach**

As research administration at many institutions is highly decentralized, it is often challenging to develop institutional solutions to federal requirements that reflect best-practice and still allow the flexibility inherent in individual department culture and business environment. This is especially the case when there is a significant sense of urgency from the government competing with other institutional priorities outside of the research portfolio for resources and priority. The dilemma is further exacerbated when the changes necessary to meet new federal standards will impact university-wide systems, process and policy.

Changing what has been a traditional approach to timely closeout can become quite an extensive scope of work. Thus, prioritizing the risk, understanding upcoming deadlines, and assessing which policy/processes and technology items have the longest lead times, are critical to getting prepared. Following is a very high level summary of the approach that Duke University is taking:

A. Conduct “Readiness” analysis of upcoming end-dates
   a. What are the peak months of activity for closeouts? What are the competing priorities (proposal deadlines, academic & financial calendar)?

B. Identify the transactions/areas that create the greatest risk to an untimely closeout
   a. Are there G/L accounts or types of transactions that routinely cause late closeout? Possibly internal billing for recharge centers (e.g. lab animals and DNA sequencing); is there a consistent pattern of late invoicing from subawardees; is it problematic to manager closeout when faculty are cross-appointed or are “owned” by separate units?

C. Determine if internal business process and policies need to be revised.
   a. Examine the current Closeout Process – What tools are available to support the process, and are there early warning signals in the system to advise if a closeout is in danger of being late?
   b. Peer Invoicing Timeline – If late subrecipient billing is an issue, what measures can be taken to mitigate?
   c. Procurement Terms and Conditions – Is there consistent late invoicing among certain vendors, or is the internal process too slow?
   d. Internal billing (shared resources, clinical systems, student systems, etc.) – What systems can be improved to enhance timely and transparent billing?
e. Role of Parent – When internal “convenience” subaccounts are established, are the roles and “march in” rights of the parent clear so that internal subaccounts can be “taken over” if necessary to bring the project to close?

f. Cost Transfer policy – Should this be changed to eliminate late transfers that impede closing?

g. NCE Management – Is there a process for units to advise early in the project that a NCE will be requested?

h. FFR policy – Is there a clearly defined policy on FFR revisions, and a system that supports production of the FFR?

D. Evaluate impact on technology – what changes need to be made to:

a. Sponsored Programs Billing & Reporting Database

b. Improved LOC Draw process (code-by-code draw and increased frequency)

c. Tracking of Programmatic and Administrative Reports

d. Management Reporting to identify chronically slow units

E. Evaluate impact on training & education (faculty and staff)

F. Support from leadership for technology resources and eventual business process change (and associated disruption)

a. At Duke, we have a weekly meeting of senior leaders that includes the VP Finance, VP Human Resources, Vice Provost for Research, Vice Dean for Research, Executive Vice Dean Administration from the School of Medicine, and the Executive Vice Provost. This group meets twice a month with leadership from all primary research administration offices to address research support opportunities, improvement to technology and reducing faculty burden.

Critical to the success is evaluating the adequacy of functional resources in central offices, departments, and technology support to staff the initiative. Each university may need to ask: Do we need a dedicated implementation team that can assist with the technology and business process/policy work and then assist the departments during the transition.

As you assemble this project plan and associated team, it is critical that you consider the lead time for changes (what is the cycle time to get the necessary allocation of technology resources to make significant system changes), breadth and depth of stakeholder impact, financial risk, faculty burden, and departmental disruption.

**Conclusion**

The enforcement of the longstanding requirement to submit final financial and progress reports is accelerating at a significant pace and may catch many institutions by surprise. The ability to meet this requirement, and the implementation of subaccounting may require a consolidated and coordinated effort that addresses improvements to technology and changes to business process and policy. Some institutions, such as Duke, are fully acknowledging this and are meeting the requirement
with a project team that includes dedicated staff and strong representation from departments to address the compliance and financial risk in a manner that is supportive of the departments’ culture and the faculty research.

Editor’s Note: All, we are happy to hear that NIH will not implement the subaccounts payment policy until Oct. 1, 2015 per NIH NOT-OD-14-103.

References

GAO Report on Closeouts (July 2012)

◆ http://www.gao.gov/assets/600/592995.pdf • GAO identified more than $794 million in funding remaining in expired grant accounts (accounts that were more than 3 months past the grant end date and had no activity for 9 months or more) in the Payment Management System (PMS)

NIH Domestic Awards to Transition to Payment Management System Subaccounts in FY 2014 (9/3/13) NIH Notice NOT-OD-13-112


◆ NIH would transition to SubAcct reporting starting on 10/1/13 (this was subsequently delayed to 10/1/14 by Notice 13-120)

◆ Final reports are due 90 days after end-date

◆ PMS “will now hold payment requests for funds in subaccounts for awards that are 90 days or more beyond the project period end date”

NIH Domestic Awards to Transition to Payment Management System Subaccounts in FY 2014 and FY 2015 (September 26, 2013)


◆ Transition to SubAcct reporting (initially conveyed via 13-112) would be delayed until 10/1/14

Uniform Guidance (Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards), Section § 200.343

◆ (a) The non-Federal entity must submit, no later than 90 calendar days after the end date of the period of performance, all financial, performance, and other reports as required by or the terms and conditions of the Federal award. The Federal awarding agency or pass-through entity may approve extensions when requested by the non-Federal entity.

◆ (b) Unless the Federal awarding agency or pass-through entity authorizes an extension, a non-Federal entity must liquidate all obligations incurred under the Federal award not later than 90 calendar days after the end date of the period of performance as specified in the terms and conditions of the Federal award.

◆ (g) The Federal awarding agency or pass-through entity should complete all closeout actions for Federal awards no later than one year after receipt and acceptance of all required final reports.

NIH Updating Grant Closeout Policies and Procedures to Align with New HHS
Requirements (April 24, 2014)
◆ All reports required for closeout must be submitted no later than 90 days after the project end date.
◆ Clarifies when Agency can proceed to a unilateral closeout if the grantee is non-communicative
◆ Includes FAQ’s to clarify aspects of the Notice http://grants.nih.gov/grants/closeout/faq_grants_closeout.htm

Administrative Changes to NIH Domestic Awards Transition to Payment Management System Subaccounts - NOT-OD-14-093 - May 16, 2014
◆ Implementation for domestic, non-competing awards will occur between October 1, 2014 and September 30, 2015.
◆ Unliquidated Obligations on the Subaccount Transitional FFR; if there are unliquidated obligations at the end of the first “administratively shortened” competitive segment, these may be reported on the subaccount transitional FFR expenditure data report.
◆ NIH continues to seek some relief from the DHHS by requesting an additional year for grantees to have adequate time for system developments necessary to manage this transition for non-competing awards

Revised Timeline for Administrative Changes to NIH Domestic Awards to Transition to Payment Management System Subaccounts - NOT-OD-14-103 - July 11, 2014

About the Author
James D. Luther, MA, Associate Vice President for Finance & Research Costing Compliance Officer at Duke University. His responsibilities include oversight of the post-award areas for the University and School of Medicine, management of fixed and moveable assets, negotiation of Duke’s indirect cost and fringe benefit rates, and the Research Costing Compliance (RCC) program. Jim is a regular presenter at NCURA, the Chair of the COGR Costing Committee, and the Co-Chair of the FDP Admin Burden Subgroup. He can be reached at james.luther@duke.edu
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Frequently Asked Questions about PMS Subaccounts
National Institutes of Health

I. General

A. Background

1. Why is NIH changing to PMS subaccounts?

NIH is transitioning to Payment Management System (PMS) subaccounts in response to a U.S. Department of Health and Human Services (HHS) directive to Agencies intended to enhance financial data integrity and financial closeout for all awards.

2. What is a competitive segment?

The initial project period recommended for support (usually up to 5 years) or each extension of a project period resulting from a renewal award. See applicable sections below for more information on impact of the transition to subaccounts on the competitive segment for your award type.

3. How do I know the fiscal year (FY) of the funds used to fund my award?

The Fiscal Year is a data field on the award located in SECTION I – AWARD DATA, in the Fiscal Information section as well as in the chart immediately below. See the following example:

Figure 3320.16-1

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Recommended future year total cost support, subject to the availability of funds and satisfactory progress of the project.

Fiscal Information:
- CFDA Number: 93.859
- EIN: xxxxxxxxxxxx
- Document Number: RGM103580A
- PMS Account Type: P (Subaccount)
- Fiscal Year: 2015

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4. Will the Notice of Award (NoA) indicate the type of PMS subaccount?

In November 2013, NIH will place a “PMS Account Type” indicator on the award under the Fiscal Information header in Section I. See diagram in previous question for example. The indicator appears just above the “Fiscal Year.”

5. What is a type 4 award?

A type 4 award is a funded extension, for example Merit Extensions (4R37...) or Phase II Fasttrack SBIRs (4R44...).

For the subaccount transition, NIH is using type 4s as a technical solution to separately track obligations and payments for awards that are transitioning to PMS subaccounts during FY13, FY14, FY15 and FY16. The document number for the type 4 will increase by one letter (e.g., once the type 4 is issued, a document number of RCA123456A would become RCA123456B). The change in type and the change in document number do not affect the due date or submission process of the progress report. See applicable sections below for more information on the transition to sub-accounts for on your award type.

6. Are grantees required to terminate subawards then reissue them once the prime award has transitioned to a subaccount? Similarly, is there an expectation that grantees must handle ongoing commitments differently due to the subaccount transition? (Added 05/28/2015)

NIH does not require that grantees terminate then reissue subawards nor does it expect grantees to handle ongoing commitments in the remaining budget years of the project differently due solely to subaccount transition. In fact, Section III of the Type 4 NoA will state:

“This award was issued as a non-competing continuation with a change in document number. The original competitive segment has been divided into two administrative segments. This change was made solely to accommodate the HHS-mandated transition to Payment Management System (PMS) subaccounts. Therefore, costs may be allocated throughout the competitive segment as if it was not administratively divided.”

7. Will NIH continue to issue type 5 awards as type 4 awards after the transition? No, NIH will return to the standard use of the type 4s and 5s in future fiscal years.

B. Payment Management System

8. Who do I contact if I have questions on completing PMS forms or drawing down funds from PMS?

Should you require assistance in completing the PMS forms, please call PMS on (877) 614-5533 FREE or e-mail PMS at PMSSupport@psc.gov. Questions may also be directed to the ONE-DHHS Help Desk at http://www.dpm.psc.gov/help/help.aspx?explorer.event=true.

9. Where do I find more information on PMS registration and training?

Visit http://www.dpm.psc.gov/training/grant_recipient_international.aspx for
an overview of the PMS system. To register for PMS Grant Recipient Training
event=true

send an email to PMS_Training@psc.hhs.gov. See instructions on information
that must be included in the email.

II. Domestic Grantees

A. General

10. When is NIH transitioning domestic awards from PMS pooled accounts to PMS
subaccounts?

NIH will continue transitioning payment for all domestic awards with new docu-
ment numbers from PMS pooled accounts (G accounts) to PMS subaccounts (P
subaccounts) between October 1, 2013 and September 30, 2016. The payment for all
new (competing) NIH domestic awards made with FY14 and FY15 funds will use
PMS P subaccounts.

The transition of payment for non-competing continuation award will now be
delayed one year and will thus begin October 1, 2015. See NOT-OD-14-103, NOT-
OD-14-093, and NOT-OD-13-120 for more information.

11. How will the transition to subaccounts effect my competitive segment?

For continuing domestic awards issued in FY16 (awards issued after October 1,
2015) the competitive segment will become two mini “competitive segments”:
◆ the first segment begins at the budget period start date of the current competitive
segment and ends at budget period end date of the FY15 award and
◆ the second segment begins with the budget period start date of the FY16 award
and ends with the project period end date on that award.
◆ See example Change from Pooled Accounts to Subaccounts For Domestic Awards
FY16 (PDF - 94 KB)

12. What is the purpose of a Subaccount Transitional FFR? (Added 05/28/2015)

The Subaccount Transitional FFR is akin to an annual FFR. However, it enables NIH
to end the grant’s association with the pooled PMS payment account and transition
award payments to the PMS subaccount established for the grant, including trans-
ferring any carryover funds and unliquidated obligations remaining in the pooled
account. Note: Once NIH approves the Subaccount Transitional FFR, the grantee may
no longer access the pooled account; it must request payment from the subaccount.

13. Is there a different form for the Subaccount Transitional FFR? What type of
report is this considered? (Added 05/28/2015)

Grantees should use the SF-425 as they would for an annual FFR and mark “annual” in
box 6. Additionally, grantees should enter “Subaccount Transitional FFR” in box 12.

14. Is the P subaccount established in PMS with the issuance of the Type 4 Notice of
Award?
Yes.

15. Will both PMS G accounts and PMS P accounts be active at the same time?

NIH anticipates transitioning all new and continuing domestic awards made to the PMS P subaccount by the end of FY16, i.e., September 30, 2016.

All new (competing) domestic awards made in FY14 and FY15 will use PMS subaccounts (P subaccounts).

For non-competing continuing awards that have not yet transitioned to subaccounts, grants issued prior to October 1, 2015, will use the G account until the FY16 award is issued. Once the FY16 awards is issued, those FY16 awards will use the P subaccount and the grantee will submit an FFR for the FY15 award.

Some examples of awards that will remain in the pooled accounts, multi-year funded awards made prior to October 1, 2013 (e.g., DP3, C06) and awards in a no-cost extension made prior to October 1, 2015.

16. Will the PMS G account and the PMS P subaccount for a specific award have the same document number?

No. The document number will increase by one letter once the Notice of Award is issued that transitions the project award to a PMS P subaccount. For example, a document number of RCA123456A would become RCA123456B. See I.A.5 above.

17. If an award in the PMS G account receives a no-cost-extension in FY 2014 or FY 2015, will the funds remain in a G account or be transitioned to a P subaccount?

The funds will remain in the G account.

B. Carryover

18. Is NIH changing the carryover authority for domestic awards?

NIH is not changing the carryover authority for domestic awards. NIH is transitioning from pooled accounting to subaccounting beginning FY14 through FY16, which necessitates that domestic grantees report unobligated balances from previous FYs so those funds can be reobligated to the new subaccount in PMS for the award. The balance reported on the Subaccount Transitional FFR will be re-obligated in PMS regardless of the carryover authority for the award. If the award was issued with automatic carryover authority, the grantee may drawdown the carryover funds and obligate as they would now, once this Subaccount Transitional FFR has been processed. If the award was not issued with automatic carryover authority, the grantee may not drawdown or obligate the funds unless a prior approval request has been approved and a revised NoA reflecting the approved carryover amount has been issued.

See example Carryover on Domestic Awards from FY15 to FY16 (PDF - 133 KB)

*In accordance with existing policy, the GMO will review unobligated balances in excess of 25 percent of the total authorized amount for the budget period and may request additional information from the grantee as part of the review. If the GMO determines that some or all of the unobligated funds are not necessary to complete the project, the GMO may restrict the grantee’s authority to automatically carry over unobligated balances in the future, use the balance to reduce or offset funds.
NIH funding for a subsequent budget period, or use a combination of these actions. The GMO’s decision about the disposition of the reported unobligated balance will be reflected in the terms and conditions of the NoA.

19. Will carry over funds be added to the P subaccount once the Subaccount Transitional FFR is accepted?

Yes. Carry over funds are added to the P subaccount upon NIH’s acceptance of the Subaccount Transitional FRR.

20. Should the expenditures reported on the Subaccount Transitional FFR match the disbursements reflected in the PMS quarterly cash transaction report? What happens if they do not match when the Subaccount Transitional FFR is submitted?

These numbers—i.e., expenditures reported and PMS disbursements requested—do not need to match for NIH to accept the Subaccount Transitional FFR and add carry over funds to the P subaccount. However, the grantee is responsible for reconciling these amounts as soon as possible if a discrepancy exists. In this sense, NIH is reviewing the Subaccount Transitional FFR as an interim financial report rather than a final FFR for grant closeout.

C. Federal Financial Report Cash Transaction and Expenditure Data


Yes, domestic awards are in PMS P subaccounts, which require the completion of quarterly Federal Financial Report (SF 424) Cash Transaction data.

22. When completing the expenditure Subaccount Transitional FFR for the FY15 award, how do I reflect the unobligated amount from the previous segment to carryover to the new segment?

Whether there is carryover authority or not, in the new project period, the grantee must populate this amount in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR (see screen shot below). Failure to file FFRs in a timely manner may affect future funding.

Figure 3320.16-2

23. How do I report unliquidated obligations on the FFR for a domestic FY15 award?

FY15 will be the last year for which NIH issues funds in pooled accounts for non-competing domestic awards; therefore, the FFR for the FY15 year will be the Subac-
count Transitional FFR for the “administratively shortened” competitive segment. If there are unliquidated obligations at the end of the “administratively shortened” competitive segment, this should be reported on the Subaccount Transitional FFR expenditure data report. See question Domestic C.2 for unobligated balances reported on this FFR.

24. My award was not issued under SNAP. Are there any changes to my FFR expenditure data reporting?

Awards not issued under SNAP are still required to submit FFR expenditure data annually. See NIH Grants Policy Statement, Section 8.4.1.5.2 Financial Expenditure Reports. However, the cumulative amount should only reflect the total for the competitive segment (see Domestic A.2).

For all awards issued with new document numbers (i.e., for award types 1, 2, 4, 6, 7, 9), the cumulative balance on the expenditure FFR will begin with the initial award issued under that document number.

For continuing non-SNAP awards converted from a type 5 to a type 4 in FY16 the cumulative totals will be based on the, “administratively shortened” competitive segments:

1) the first covering the period from the start of the competitive segment until the start of the Type 4.

2) the second covering the funding period from the start of the Type 4 award through the end of the competitive segment.

For all awards, if there was an unobligated balance from the previous award, it must be entered in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR.

25. My award was issued under SNAP. Are there any changes to my FFR expenditure data reporting?

Yes, but only to accommodate the transition to subaccounts for FY16. For continuing awards under SNAP to domestic institutions that had not yet transitioned to subaccounts, grantees will need to submit a Subaccount Transitional FFR covering awards from FY15 and earlier (i.e., awards issued prior to October 1, 2015).

After FY16, when all awards have transitioned to subaccounts, the FFR reporting requirements will return to the standard process, which is generally as follows: for domestic awards under SNAP, an FFR is required only at the end of a competitive segment rather than annually. The FFR must be submitted within 90 days after the end of the competitive segment and must report on the cumulative support awarded for the entire segment (NIH Grants Policy Statement, Section 8.4.1.2.3 Modified Financial Reporting Requirements). Unobligated balances for awards issued in FY16 and beyond will be reflected in the PMS subaccount.

26. My award was issued under SNAP. How do I prepare my FFR expenditure data?

See NIH Grants Policy Statement, Section 8.4.1.2.3 Modified Financial Reporting Requirements.
If the award is a new award to the institution (Type 1, 2, 4, 6, 7, 9) issued in FY14 or later, only one FFR will be submitted for the award at the end of the competitive segment.

For SNAP awards to a domestic institution issued as a non-competing continuation award in FY16 for awards that have not yet transitioned to subaccounts, the grantee will submit two FFRs:

1) the first, a Subaccount Transitional FFR, covering the period from the start of the competitive segment until the start of the Type 4

2) the second covering the funding period from the start of the Type 4 award through the end of the competitive segment. If there was an unobligated balance from the previous award, it must be entered in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR.

27. If there are changes to the expenditures that would impact the Subaccount Transitional FFR, does the report need to be revised or resubmitted? Or do all transactions posted after the end date, regardless of what year they relate to, post in the subaccount? (Added 05/28/2015)

As indicated in Section 8.4.1.5.3 of the NIH Grants Policy Statement: When the revision results in a balance due to NIH, the recipient must submit a revised report whenever the overcharge is discovered, no matter how long the lapse of time since the original due date of the report. Revised expenditure reports representing additional expenditures by the recipient that were not reported to NIH within the 90-day time frame may be submitted electronically through the eFSR/FFR system to OFM with an explanation for the revision. The explanation also should indicate why the revision is necessary and describe what action is being taken by the recipient to preclude similar situations in the future. This should be done as promptly as possible, but no later than 1 year from the due date of the original report for annual FFRs and no later than 60 calendar days from the due date of the original report for final FFRs (i.e., 180 days from the project end date). If an adjustment is to be made, the NIH awarding IC will advise the recipient of actions it will take to reflect the adjustment.

D. Payment Management System

28. I have questions about processing a batch drawdown of funds from PMS. Where should I direct my questions?

For more information on the PMS Payment File Upload Feature see http://www.dpm.psc.gov/grant_recipient/bulkpaymentfile/bulkpaymentfile.aspx?explorer.event=true.

For additional assistance with using the new bulk payment file feature in PMS, please contact the ONE-DHHS Help Desk at 1-877-614-5533 FREE or PMSSupport@psc.gov.
III. Foreign Grantees

A. General

29. When will NIH transition from fixed quarterly payments to PMS subaccounts?

NIH will transition payment for all new and continuing foreign awards from fixed quarterly payments to PMS subaccounts (B subaccounts) between October 1, 2012 and September 30, 2013. See NOT-OD-12-139 for more information.

30. Does this affect payment for foreign fellows?

Foreign fellows will continue to be paid by check or EFT during FY13. See section Fellows Training at Federal and Foreign Institutions A.3 below for information on the transition of these payments during FY14.

However, the policy announced in NOT-OD-12-139 does affect payment of the institutional allowance for foreign fellowships. Payments made to the foreign institution for institutional allowance will be made through PMS subaccount being with FY13 awards.

31. How will the transition to subaccounts affect my competitive segment?

For continuing foreign awards issued in FY13 (awards issued after October 1, 2012) the competitive segment will become two competitive segments:

the first begins at the budget period start date of the current competitive segment and ends at budget period end date of the FY12 award and second begins with the budget period start date of the FY13 award through the and ends with the project period end date of the current competitive segment.

See example Changes to Continuing Foreign Awards in FY13 (PDF - 69 KB)

B. Carryover

32. Is NIH changing the carryover authority for foreign awards?

NIH is not changing the carryover authority for foreign awards. NIH is changing the internal accounting systems used for payment of foreign awards, which necessitates that foreign grantees return unobligated balances from previous FYs so those funds can be tracked in the new accounting system of record. The balance returned to NIH will be re-obligated in PMS regardless of the carryover authority for the award. If the award was issued with automatic carryover authority, the grantee may drawdown the carryover funds and obligate as they would now.* If the award was not issued with automatic carryover authority, the grantee may not drawdown or obligate the funds unless a revised NoA reflecting the approved carryover amount has been issued.

See example Carryover on foreign Awards FY13 (PDF - 133 KB)

*In accordance with existing policy, the GMO will review unobligated balances in excess of 25 percent of the total authorized amount for the budget period and may request additional information from the grantee as part of the review. If the GMO determines that some or all of the unobligated funds are not necessary to complete the project, the GMO may restrict the grantee’s authority to automatically carry
over unobligated balances in the future, use the balance to reduce or offset NIH funding for a subsequent budget period, or use a combination of these actions. The GMO’s decision about the disposition of the reported unobligated balance will be reflected in the terms and conditions of the NoA.

33. Will foreign institutions need to return unobligated balances on continuing awards to NIH via check every year?

No, foreign grantees will need to return the unobligated balances on continuing award from FY12 and earlier (i.e. awards issued prior to October 1, 2012) to accommodate the transition to the new payment system in FY13 only. Unobligated balances for awards issued in FY13 and beyond will be reflected in the PMS.

C. Payment Management System

34. What if I drawdown funds, but cannot obligate them within three business days because I need to complete additional requirements from my country or my institution in order to be able to spend the funds?

This requirement is intended to minimize the time elapsing between the transfer of funds from the Federal government and disbursement by a grantee. Therefore, although the grant may be financed by advance payments, the intent is that grantees draw funds on an as-needed basis—specifically, no more than 3 days before the funds are needed. All Federal funds deposited by PMS in a grantee’s bank account as an unrestricted advance payment should be fully disbursed (checks written, signed, and issued to the payees) by the close of business the next workday after receipt of the funds. If there are constraints on the expenditure of funds, (e.g. your government requires authorization to expend funds from other countries), the funds should be fully disbursed by the close of business the day following availability of funds.

D. Federal Financial Report Expenditure Data

35. When completing the FFR for the FY13 award, how do I reflect the unobligated amount from the previous segment for the new segment?

Whether there is carryover authority or not, in the new project period, the grantee must populate this amount in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR (see screen shot below). Failure to return unobligated balances in a timely manner may affect future funding.

**Figure 3320.16-3**
36. My award was not issued under SNAP. Are there any changes to my FFR expenditure data reporting?

My award was not issued under SNAP. Are there any changes to my FFR expenditure data reporting?

Foreign awards not issued under SNAP are still required to submit FFR expenditure data annually. See NIH Grants Policy Statement, http://grants.nih.gov/grants/policy/nihgps_2012/nihgps_2012.pdf, Section 8.4.1.5.2 Financial Expenditure Reports. However, the cumulative amount should only reflect the total for the competitive segment (see Foreign A.3). For FFRs for an FY13 award (Types 1, 2, 4, 7, 9), the cumulative balance on the FFR will begin with the FY13 award. If there was an unobligated balance from the previous award, it must be entered in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR.

37. My award was issued under SNAP. How do I prepare my FFR expenditure data?

See NIH Grants Policy Statement, http://grants.nih.gov/grants/policy/nihgps_2012/nihgps_2012.pdf, Section 8.4.1.2.3 Modified Financial Reporting Requirements. Awards issued under SNAP to foreign institutions after October 1, 2012, foreign grantees are not required to report expenditure data annually via the FFR. For these awards, FFR expenditure data is required only at the end of a competitive segment (see Foreign A.3). If the award was issued as a non-competing continuation award in FY13 (Type 4), the grantee will submit one FFR covering the funding period from the start of the Type 4 award through the end of the competitive segment. If there was an unobligated balance from the previous award, it must be entered in the field entitled “Unexpended Balance From Prior Project Period” at the top of the FFR. If the FY13 award is a new award (Type 1, 2, 9), only one FFR will be submitted for the award at the end of the competitive segment.

E. Exchange Rate

38. What exchange rate should I use?

For initial awards issued after October 1, 2012 (Fiscal Year 2013) when preparing the FFR expenditure data grantees must use the currency rate in effect at the time the funds are drawn down from PMS.

IV. Fellows Training at Federal and Foreign Institutions

A. General

39. Why is NIH changing the payment method for Fellows training at Federal and foreign institutions?

In addition to the HHS directive mentioned in the first background question, the transition to PMS subaccount will provide Fellows training at Federal and foreign Institutions grantees with the ability to request funds electronically.

40. When will NIH transition payment for Fellows training at Federal and foreign institutions to PMS subaccounts?

NIH will transition payment for all new and continuing awards for Fellows train-
ing at Federal and foreign institutions to PMS subaccounts (B subaccounts) between October 1, 2013 and September 30, 2014. See NOT-OD-13-111 for more information.

41. Does this affect payment for fellows training at foreign sponsoring institutions (foreign fellows)?

Yes, but only for the stipend award and any travel reimbursement paid directly to the individual fellow in FY2014 and beyond. Fellows training at foreign sponsoring institutions will now be paid stipend and any travel reimbursement through the Payment Management System. However, the payment of the institutional allowance for foreign fellowships transitioned to PMS subaccounts in FY13 (see NOT-OD-12-139 for more information.)

42. How does this affect payment for fellows training at Federal sponsoring institutions (Federal fellows)?

Beginning with the FY2014 award, all payment for Federal fellows will be through PMS. NIH ICs will continue to administer the Institutional Allowance; however, all disbursements will be made through PMS.

B. Payment Management System

43. Who do I contact if I have questions on completing PMS forms for the Fellow?

Should you require assistance in completing the PMS forms for individuals, please call PMS on (877) 614-5533 FREE or e-mail PMS at PMSSupport@psc.gov. Questions may also be directed to the ONE-DHHS Help Desk at http://www.dpm.psc.gov/help/help.aspx?explorer.event=true.

V. Federal Grantees

A. General

44. Why is NIH changing the payment method for fellows training at Federal institutions?

In addition to the HHS directive mentioned in the first background question, the transition to PMS subaccount will provide Federal grantees with the ability to request funds electronically.

45. When will NIH transition Federal awards from check payments to PMS subaccounts?

NIH will transition payment for all new and continuing Federal awards to PMS subaccounts (B subaccounts) between October 1, 2013 and September 30, 2014. See NOT-OD-13-111 for more information.

46. How will the transition to subaccounts effect my competitive segment?

For continuing Federal awards issued in FY14 (awards issued after October 1, 2013) the competitive segment will become two mini “competitive segments”:

◆ the first segment begins at the budget period start date of the current competitive segment and ends at budget period end date of the FY13 award and
the second segment begins with the budget period start date of the FY14 award and ends with the project period end date on that award.

See example Change to Subaccounts For Federal Awards FY14, which is also applicable to Federal awards (PDF - 94 KB)

What You Need to Know About Financial Closeout of NIH Grants

National Institutes of Health

Megan Columbus:
Welcome to another edition of All About Grants. This is Megan Columbus from NIH’s Office of Extramural Research here today to talk about what administrators need to know about financial closeout of grants. I have with me Michelle Bulls, Director of OER’s Office for Policy for Extramural Research Administration. Michelle, can we start today by just explaining exactly what requirements there are for grantee closeout?

Michelle Bulls:
Absolutely, Megan. There are three required reports for our consideration of closeout. There’s the Federal Financial Report, there’s the Scientific Progress Report and the Final Invention Statement.

Megan Columbus:
And today we’re going to be talking about that financial report.

Michelle Bulls:
Yes. Today’s focus will be about the Federal Financial Report and the closeout of those and how our administrators need to understand what those requirements are from both the grantee’s perspective and the NIH’s perspective.

Megan Columbus:
Okay, so looking at the Federal Financial Report what does it entail?

Michelle Bulls:
Looking at the Federal Financial Report that is submitted to the agency, the Federal Financial Report cannot have an unliquidated obligation. The unobligated balances are okay because lots of times there’s continued support so that money can be carried forward unless there’s a restriction on the award at closeout. But for the most part there’s no opportunity to have any unliquidated obligations and all of the program income must be reported on the final financial reports.

Megan Columbus:
Can you define for me “unliquidated obligation”?

Michelle Bulls:
Yes. An unliquidated obligation is an invoice that the grantee has allotted money to pay, but it has not been paid because the invoice has not come into either from a subcontract support or from any other obligation. So they’ve obligated, but they haven’t actually allocated that money there. And so we cannot have any unliquidated obligations.

dated obligations showing on that final report. It has to be zero so all of those final invoices are paid and closed out within the grantee system.

*Megan Columbus:*  
And so the federal share and the federal outlay must match?

*Michelle Bulls:*  
The federal share and the federal outlay should match and if it doesn’t on a final report that’s okay. It’ll show as an unobligated balance, not unliquidated but unobligated balance. In other words, the federal share was this amount, the grantee outlaid a different amount and the balance is showing as unobligated.

*Megan Columbus:*  
In which case can we close out the grant?

*Michelle Bulls:*  
Yes. We actually can close out a grant with an unobligated balance on the books.

*Megan Columbus:*  
And what happens to that balance?

*Michelle Bulls:*  
The agency deobligates the funds and it goes back to Treasury.

*Megan Columbus:*  
Got it. So what can get in the way of being able to successfully close out a grant?

*Michelle Bulls:*  
So it’s very interesting because NIH has been having some really frank and different types of discussions with our grantees, specifically in the area of financial closeout, because a lot of times what grantees and the NIH agency doesn’t really necessarily highlight as a hindrance is the fact that the Expenditure Report that’s submitted to the agency and the Cash Report that’s submitted to the Payment Management System must equal. In other words they cannot be different. They must reconcile. They cannot have different balances on there. And this is something that has always been in the policy, but had not been highlighted before NIH adopted the HHS requirement for unilateral closeout. This is a main concern for us because if the two balances from both reports don’t equal, NIH can submit a closeout code but in the Payment Management System it stays open. And that’s a concern for our grantees because at that point we could essentially close the grant out, deobligate it at the cash transaction level and cause the grantee to go into debt status even though they show a zero unobligated balance on their Expenditure Report. And this has been something that we’ve been really trying to remind our grantees of and especially the administrators when we’re doing, you know, our updates and making sure that everyone understands that, yes, all three reports are required for closeout but that financial report is key to the ability to truly close that grant out in
our systems.

*Megan Columbus:*
If our grantees have questions about, and concerns about, closing out a particular grant who should they be speaking to at NIH?

*Michelle Bulls:*
They should be speaking to their grants management official that is outlined on the Notice of Award. If they have questions about the policy implications of closeout, which are truly generic, for instance, just talking about what does it mean to make sure that these reports are reconciled or what is the policy on that, then they should definitely come to OPERA, the grant’s policy, to address the generic policy. Before the actual details of what they need to do for a specific award, they definitely need to talk to their grants management official because their grants management official will tell them, you know, what they need to do and walk them through it.

*Megan Columbus:*
At the end of this we will give the email address for any questions that could go to OPERA.

*Michelle Bulls:*
General policies. We will not answer questions about the details of the award.

*Megan Columbus:*
Is there anything else our grantees need to know about this?

*Michelle Bulls:*
Yes, so one of the things that we have been talking about, Megan, is the adoption of the HHS Unilateral Closeout Policy. And what that requires the agency to do is to begin closing out grants at least 180 days after the end of the project period. Lots of times there’s a concern with our grantees, especially our administrators, where they are submitting reports to the agency with a zero balance and lots of times within the institution there’s another side of the house, typically the accounting side that submits the Payment Management Cash Report to the Payment Management System. And one of the things that we’ve noted is that the grantee really has to have a lot of internal discussion across the table from each side of the house on what the reports look like when they are submitted. They’re very different reports. The Expenditure Report captures the expenditures, the federal outlays and what has been obligated or expended by the grantee. And the Cash Report does focus solely on reporting the cash that was drawn down from the Payment Management System. The Cash Report is always, always due in a cash quarter. For our Expenditure Reports, it’s due 120 days after the project period ends. These two dates don’t necessarily match and that’s where the discrepancies come in. So grantees need to understand that there may be an instance where they need to either revise their Federal Cash Report to match the Federal Expenditure Report and that’s typically what has to happen otherwise the agency will be forced to close it out at the cash transaction amount.
which is, most of the time, lower than what was actually submitted on the Expenditure Report.

**Megan Columbus:**
So what I’m understanding is your strong advice to our community is make sure that everyone who’s submitting those financial reports, whether they be the Cash Transaction Reports or the Expenditure Reports, that they’re talking to each other making sure those are reconciled.

**Michelle Bulls:**
As best they can, absolutely.

**Megan Columbus:**
And so if there’s any problem with that who are they talking to?

**Michelle Bulls:**
Yes, so if there’s any problem with reconciling—and there may be some problems with reconciling, but the main takeaway here is that if they’re going to be late or delayed by more than 120 days after the end of the project period they need to begin to contact the agency, their IC official, the grants management official often and early to communicate this delay to them. Otherwise at that 180th day the grantee will go into unilateral closeout. And unilateral closeout does not take into account anything other than the agency has made a decision based on our discretion to enter into a closeout without their reports reconciling, which could create a debt for the grantee and we do not want that to happen.

**Megan Columbus:**
But if they talk to us during the time we may be able to have some wiggle room?

**Michelle Bulls:**
If they are talking with us and there’s a justification for why they’re delayed, the agency does have discretion to provide an extension. However, that is not something that will be considered very often even in a lot of the communications but—because it has to be a strong justification for why. But we do encourage our grantees to make sure that they stay in touch often and early, contacting the IC official, as well as the Closeout Center.

**Megan Columbus:**
Good to know. Thank you for joining us today.

**Michelle Bulls:**
Thanks, Megan.

**Megan Columbus:**
For NIH and OER, this is Megan Columbus.
Announcer:
If you have questions or concerns about the close out process please contact the grants management Specialist identified on the notice of award. For questions about the policy implications of closeout please contact the Office of Policy for Extramural Research - Division of Grants Policy at 301 435-0949 or you may email them at GrantsPolicy@mail.NIH.gov
This section includes practical guidance and tools relating to post-award administration. These materials are culled from a variety of authoritative sources.

**Tool for Reviewing Your Financial Management Practices**

AIS editors

Proper financial management does not happen by itself. It requires staff time, tools, and training to make sure that each university department is implementing sound and compliant financial management policies. An effective financial management process would likely include the following elements:

- **Audit Trails and Documentation.** These should be generated as part of the routine function of administering grants, not created after the fact.

- **Controls.** Controls over expenses must be in place to ensure that charges are in accordance with the terms of the grant agreement, any agency-specific requirements such as salary limitations, cost accounting standards, and the Office of Management and Budget circulars.

- **Monitoring.** Monitoring capabilities that provide good oversight of project expenses are essential. Monitoring tools should allow for review of actual expenses for allowability, accuracy, and comparison of actual vs. budgeted expenses. Your monitoring program should facilitate timely corrections of mischarges.

- **Reporting.** Reports should be made in a timely manner in compliance with the requirements of the grant and grant-making agency. Faulty reporting may be a symptom of a variety of problems, but often it’s a sign of underlying weakness because poor monitoring and controls generally make it difficult to generate accurate reports.

**Suggestions for Best Practice**

Below are some ideas for best practices to consider when developing or reviewing your financial management process:

- **Stay on Top of Policies and Procedures.** As in many things, compliance starts by writing down what’s expected of people. A formal set of policies and procedures is essential to compliance. In addition, there should be only one version of policies and procedures. Most likely they will be accessible online. Be sure to make them as user-friendly as possible, which could include development of frequently asked questions. As policies and procedures are revised and updated, be sure to highlight the changes to make them immediately obvious to users.

- **Create Consistency.** When the pre-award office allows a cost in a proposal, and the post-award office disallows it, they may be providing inconsistent advice and information. One institution met this challenge by setting up a detailed listing of roles and responsibilities so that only one position was responsible for making any given decision. Another possible practice is to have the central sponsored research
office conduct annual surveys to assess training needs and provide training where necessary. Another institution decided to bring the pre- and post-award offices together. Another institution left the offices separate but had them answer to the same official.

◆ **Improve Online Functionality.** Many online systems for accessing financial records are simply not useful. Data often are incomplete or out-of-date. These problems result in creation of “shadow” accounting systems that are built to serve specific needs but generally are not useful for compliance monitoring. Perhaps the best solution here is to budget funds to update and improve online systems, if at all possible, so that shadow systems will be phased out willingly.

◆ **Address Lack of Oversight.** Sometimes central sponsored office staff have no oversight of sponsored project expenses, yet the office has the expertise to judge when an expense is appropriate. One suggestion for at least in part off-setting this would be to have the central sponsored projects office perform a detailed pre-award budget review to make sure only allowable costs are included in the proposal. Central office staff could prepare project profiles and conduct start-up meetings with PIs and department administrators to explain the regulations and policies.

One university created an expenditure review training manual, which detailed procedures for monitoring expenses, including judging whether they are allowable, accurate, consistent, etc. The university also requires PIs to sign monthly expenditure reports certifying that they have reviewed and agree with the charges to the grant. Central sponsored offices could routinely review all — or a sample of — expenditures. At one university, that process serves to set the agenda for monthly meetings with business managers to address specific concerns, including pre-award expenditures, overdrafts, accounts nearing closeout, and accounts that have unusual balances or appear to be drawing down too quickly. Another best practice might be to assess each sponsored account annually. The assessment should look at subjects such as cost allowability and allocability, cost sharing, effort, cost transfers, subcontracts, under expenditures, accelerated spending, rebudgeting, and F&A calculations. This annual assessment will help head off problems before they get out of hand.

◆ **Clarify Cost Transfer Practices.** Like all policies, the cost transfer policy should be up-to-date with sponsor requirements, clear, formally adopted, and readily available. All cost transfers involving sponsored projects accounts could be reviewed by a research accounting specialist before being approved. In addition, higher-level authorization could be required for cost transfers that exceed certain thresholds.

◆ **Don’t Overlook Financial Status Reporting.** Financial status reports frequently are late, and principal investigators and departments often don’t see these reports for approval either before or after they are submitted to a sponsor. Dealing with this issue is akin to keeping any ongoing process moving on time. One university centrally monitors project end dates. Thirty days before close out, departments
receive a reminder of their responsibilities for closeout, including a due date of not more than 45 days following the end of the project. All financial reports, beginning 90 days prior to the project end, carry reminders to principal investigators to submit closing documents, record expenses, make adjustments, and eliminate outstanding encumbrances.

The importance of closeout is stressed to subcontractors with clauses in subcontract agreements that specify that all invoices must be submitted within 45 days (or in certain cases 60 days) of the end of the project. A sponsored project office could go to the extra step of reconciling accounts at the end of each budget year, rather than waiting for the end of the project, even in cases where no annual financial status report is required. This heads off problems early in the life of a project, limiting the potential costs.

◆ Strengthen Audit Function. In many well-designed compliance programs, the internal audit function plays a major role in conducting reviews of compliance with effort reporting, direct charging, overdraft, and cost transfer regulations. Internal auditors also have a wealth of expertise that should be tapped for non-audit roles. They could be involved in developing corrective action plans and in providing remedial and refresher compliance training. There could also be a mechanism for individuals to flag or bring forward problems that might have been missed.
13330.2 Suggestions for Reviewing Your Pcard Program
AIS editors

A purchasing or procurement card — or Pcard — is a form of credit card that allows goods and services to be procured without using a traditional purchasing process. Pcards are intended to provide a more efficient way to purchase certain items, such as supplies and travel, and, in many instances, a more effective method to track and verify these expenses. Overall, the use of Pcards for sponsored programs purchases seems to be providing the desired efficiencies; however, if proper controls are not implemented and followed, it is not surprising that they can be vulnerable to abuse or mismanagement.

The following are some ideas for best practices in this area, in part developed from an analysis of a recent audit report of a Pcard program released by the National Science Foundation (NSF) Office of Inspector General (OIG) (see Figure 13330.2-1). In that audit, the NSF OIG reminded the auditee that while its internal control structure for the Pcard program may contain the “basic characteristics of an effective internal control system,” the system needs to be monitored and applied properly to be effective “in preventing or detecting fraud.”

Suggested Practices
◆ Carefully consider who will be issued a Pcard. Some institutions restrict use of the Pcard to the departmental administrator, who makes purchases on behalf others, in order to minimize the number of cards distributed and the compliance risk.

◆ Require all Pcard holders to attend training and require all users to sign agreements regarding the proper use of Pcards. Institute periodic “refresher” training, as appropriate.

◆ Establish a system for review and approval of the charge after purchase — by both the purchaser and a third party (perhaps a supervisor or departmental administrator). Be sure the process requires “timely” approval. Make key information, such as that provided in reports from the purchase card vendor and/or receipts, available. Initial and periodic training for the supervisor/third party may also be appropriate.

◆ Consider whether placing limits on the use of the cards is appropriate. These limits can come in many forms. For instance, purchases may be limited to a specified dollar threshold that is applied to an item or to purchase amounts per day or per month; sometimes limits are placed on the types of items that may be purchased with the Pcard.

◆ Develop a monitoring process to ensure staff follow purchase card policy and procedures. You also may wish to conduct periodic risk assessments of the purchase card program.

◆ Conduct periodic audits of the Pcard program. Consider whether an audit by your internal auditor is sufficient or whether the services of an outside auditor may be appropriate.
◆ Consider separating key responsibility for ordering and receiving items acquired with Pcards so that the items are shipped to and received by a different person, perhaps in a different department, from the one who ordered the items.

◆ Ensure that proper documentation and records are retained.

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**Figure 3330.2-1: What the OIG Found**

In a recent audit report, the NSF OIG noted deficiencies in three control activities that each contributed to fraud in a grantee’s purchase card program not being detected in a timely manner (see *Audit of the University Corporation for Atmospheric Research’s Purchase Card and Timekeeping Systems, OIG Report Number 08-1-003, www.nsf.gov/oig/08-1-003_UCAR.pdf*). According to the OIG, “Internal control effectiveness was diminished as a collaborative result of control activities not being performed.” Looking at the OIG’s findings and comments may be helpful to research administrators in reviewing their own Pcard policies and processes.

The OIG notes that federal regulations require recipients of federal awards to establish and maintain effective internal controls that help ensure taxpayers’ dollars are properly spent and to detect and prevent fraud, waste, and abuse. “This includes ensuring effective management and use of purchase cards.” The following is taken from the audit report:

**Control Activity: Supervisors Were not Required to Review Receipts.** To help ensure the validity of purchases, cardholders were required to maintain receipts supporting each purchase. Receipts are source documentation that provide an independent description, amount, and cost of items purchased. Each month, cardholders were required to download an electronic list of their transactions and reconcile it with their records. While an approving official (AO), who may or may not be the employee’s direct supervisor, was required to approve these transactions each month, they were not specifically required to review the receipts as part of the process. Because the AO was not required to review receipts and timely approve purchases, this materially degraded the effectiveness of the internal controls to prevent or detect the fraudulent purchases. The opportunity increases for cardholders to make fraudulent purchases without being detected, when purchases are not independently approved by reviewing source documentation or not approved in a timely manner. This opportunity can be significant if the number of cardholders and amount of funds spent by cardholders is itself significant.

**Control Activity: Responsibility for Ordering Not Segregated from the Receiving Process.** Separating key responsibilities amongst different staff, such as ordering and receiving goods and services, is another control activity that helps decrease the likelihood of fraud. Such segregation of ordering and receiving limits an organization’s exposure to staff purchasing, accepting, and recording goods and services that are unauthorized by management. Separating the ordering and receiving responsibilities is a fundamental principle of an effective internal control system and particularly critical in purchase card programs where the cardholder is responsible for ordering the goods, processing the invoices, and assigning descriptions to purchase transactions in the accounting system.

**Control Activity: Inventory of Equipment Is Not Required for Items Prone to Theft and Costing Under $5,000.** The auditee’s Property Manual encourages, but does not require, that each division’s property administrator maintain property records accounting for purchased items costing less than $5,000. However, we found that the auditee did not conduct inventories for items costing less than $5,000 which are susceptible to theft. Knowing that an inventory would not be conducted enabled the...
dishonest purchase cardholder to re-sell purchased goods with little concern that they would be
identified as missing. Also, the lack of an inventory to verify the existence of small-dollar equipment
prone to theft increases the likelihood of theft or loss of other equipment. Furthermore, property
managers within each division have the discretion to maintain records of this equipment. Having this
discretion could allow managers to decide in the future to not maintain records of the equipment
susceptible to theft. As evidenced by the fraud, allowing managers to exercise such discretion,
especially unchecked, results in inconsistent, incomplete, and inadequate accountability of equipment
under $5,000.

Information and Communication: Available Reports Not Provided to Users. An important part of an
effective internal control system is the process of timely identifying, collecting, and disseminating
information that managers need to carry out their responsibilities, including properly monitoring and
overseeing the purchase card activity. To ensure all purchases and transactions are authorized and
necessary, supervisors of cardholders, division managers, and other managers of the purchase card
program must receive and review reports about the purchases that have been made. These reports
should be used by employees at different stages in the purchase process and contribute to the overall
effectiveness of an internal control system.

Monitoring: Monitoring of Compliance with Purchasing Card Policy Is Minimal. Another important
part of an effective internal control system is monitoring the quality of performance of each control
activity over time. For the purchase card program, the monitoring process, as part of its routine
operations, should periodically verify whether employees are competently performing their control
activities to help prevent and detect fraudulent purchases. Deficiencies identified should be promptly
brought to management’s attention for action.

Risk Assessment: Periodic Risk Assessment Not Scheduled. A risk assessment provides management
with knowledge of vulnerabilities and weaknesses in program operations. It assesses the associated
risk of changes in economic, industry and internal operating conditions and the adequacy of the
control activities currently in place to address or mitigate these risks. As such, a regular scheduled risk
assessment of the purchase card program would likely have identified the inadequate segregation of
cardholder duties and supervisor and management oversight and monitoring.

Control Environment: Purchase Cardholders and Supervisors Not Sufficiently Trained. Cardholders
and supervisors need to understand their purchase card responsibilities and stewardship roles in
order to effectively execute their duties. This requires that they not only receive training before
assuming their duties, but also receive periodic refresher training thereafter. Additionally, it is
important that management recognize the importance of training and committing the necessary
resources and time for staff to attend purchase card training.
Ideas for Keeping Animal Researchers Safe

AIS editors

Federally funded animal research at universities and elsewhere is increasingly under attack by extremists and those who believe animals should enjoy some civil rights. According to the Society for Neuroscience, for example, nearly twice as many attacks were reported by members in 2007 — eleven — as in the entire five-year period 1999–2003 — six. The attacks have also become “more violent and brazen,” according to the group. But the National Institutes of Health (NIH) is not cowering — and it wants to ensure that researchers can continue their important work. “Threats to research with animals threaten the health of the nation,” according to Norka Ruiz Bravo, head of NIH’s Office of Extramural Research (OER).

On OER’s “Animals in Research” Web site (http://grants.nih.gov/grants/policy/air/index.htm), as a “first line of defense against incidents ranging from harassment and threats to break-ins and acts of domestic terrorism,” NIH strongly encourages its grantees to do the following:

◆ Operate an impeccable program of animal care and use and maintain their animal research facilities in optimal conditions at all time.

◆ Review their research portfolios to determine what activities might be targeted.

◆ Make certain that their institutional security group develops relationships with local and state law enforcement before an event happens to ensure that responses to illegal activities are prompt and adequate.

◆ Develop a crisis management plan that

  • safeguards people, animals, and institutions;

  • prepares the institution to respond with openness about the research being conducted; and

  • educates employees on how to protect their families and their personal property.

If an incident occurs involving NIH-funded animal research, NIH recommends that an institution

◆ immediately contact the appropriate officials at your institution (e.g., your Institutional Official, laboratory veterinarian, security office, etc.);

◆ immediately contact OLAW if the health or well-being of animals is jeopardized or harmed; and

◆ notify the project officer(s) of the NIH funding component(s) of the incident.

NIH has also developed a number of new resources in this area including, among other items, an outline of a preparedness program called “Be Prepared” (see Figure 3330.3-1), a Fact Sheet on the benefits of animals in research, and Media Releases about animals in research.
Figure 3330.3-1: Advice From NIH on How to ‘Be Prepared’

NIH’s “Be Prepared” program describes four key elements of an effective preparedness program, which are reprinted from the ARENA/OLAW Institutional Animal Care and Use Committee Guidebook. According to the Guidebook an institution should have in place —

1. An animal program of impeccable integrity. Each institution that receives PHS support for activities involving vertebrate animals or is subject to the authority of the Animal Welfare Act must operate an animal care and use program with clear lines of authority and responsibility. The program must include
   • a properly constituted and functioning Institutional Animal Care and use Committee (IACUC);
   • procedures for self monitoring;
   • an adequate veterinary care program;
   • an occupational health and safety program (not required under the AWA);
   • a personnel training program;
   • an environment, housing and management program for animals; and
   • appropriately maintained facilities for housing and support.

2. A security program based on risk assessment. The first step in developing a security program is to conduct a risk assessment of the institution’s facilities and an evaluation of the existing security system. Organization of a security and communication plan then follow. Some key points include
   • Determine facility vulnerability
   • Evaluate the security system
   • Check storage of research data
   • Organize a security plan
   • Organize a communication plan in the event of an incident during the day, after hours, weekends and holidays

3. An integrated communication plan with descriptions of research projects in lay terminology, spokespersons, and a telephone tree. The IACUC Chair and members can interact with institutional public information officers, researchers, veterinarians, technicians and the research administration to identify spokespersons to address animal research issues. These spokespersons should be provided adequate training. Fact sheets should be readily available about the institution’s policies and commitment to humane and appropriate animal care and use, the quality of its animal care and use program (including accreditation), and brief summaries of the value and importance of any specific animal use under scrutiny. Written materials need to be written in language understandable to nonscientists. Institutions must be prepared to respond to allegations honestly.

A phone tree should be implemented in order to quickly mobilize the individuals and entities needed to respond to an unexpected event. A phone tree is a pyramid-shaped system where each person calls between one to five other people in case of an emergency. Reliable volunteers are located towards the top of the tree, as they have to call the largest numbers of people. A phone tree for crises might include: institutional leaders, communications officers, animal program leaders, local law enforcement, etc.
Additional Resources from OLAW

NIH’s Office of Laboratory Animal Welfare has begun a series of online educational seminars. The first such seminar, “Preparing for Animal Rights Extremist Organizations,” was held in June 2008. ” For information on upcoming seminars or to access archived copies, go to www.grants.nih.gov/grants/olaw/e-seminars.htm.

A few tips that were noted in the June program include the following:

◆ **Provide Researchers ‘At Home’ Help.** One institution developed a “protestor toolkit” for researchers to keep at home that contains a camera to photograph any suspicious activities, “No Trespassing” signs to post, a “legal notice” to give to any protestors who might come to the door that explains the protestors are breaking the law by their presence, and a sheet listing actions researchers should take.

◆ **Recommends ‘Openness.’** One speaker recommended maintaining good relationships with reporters and believes it is vital to be responsive to every press call — and to be prepared to counteract all claims activists make about animal care or research. When an attack occurs, invite the press to come to the researcher’s home to see the damage for themselves, while explaining what the researcher’s work is really all about. Speak at community events. Conduct tours of your research center/facility and allow students, teachers, and others to participate in programs based there.

◆ **Carefully Screen New Employees.** One university has a “fairly extensive interview process” that includes asking “leading questions” of job candidates and does background checks on prospective employees. Screening procedures for new employees should include asking them how they became interested in working with animals and probing their past job experience. Hiring managers should also be on the lookout for new employees who request schedules that would cause them to work alone, such as on nights, weekends, and holidays.
Protecting Work Is Everyone’s Duty

Sooner or later, opponents of animal research will come for every researcher who works with animals, no matter how noncontroversial the work, or how well cared for the animals. As such, it is the duty of all scientists and their institutions to support animal investigators regardless of whether they are personally affected by threats against biomedical researchers. That was the sentiment expressed by J. David Jentsch, a professor of psychology and psychiatry at the University of California-Los Angeles who uses monkeys to study “genetic and neurochemical mechanisms that influence cognition, impulse control, and decision-making.”

“Our colleagues are under attack and they deserve our support. When the research is threatened or criticized, we have to work together as a community of scientists and academics to oppose those threats,” he said. Jentsch has long been a target of violent attacks by animal extremists; in a recent incident, the Animal Liberation Front said it had sent AIDS-tainted razor blades to Jentsch, who was described in a Los Angeles Times article as living with round-the-clock security.

He made his remarks as part of the closing panel at the three-day conference, “Animal Welfare and Scientific Research: 1985 to 2010,” held in October 2010 to discuss the history, current practices, and future of research animal care (see http://grants.nih.gov/grants/olaw/seminar/index.html). It was sponsored by the Office of Laboratory Animal Welfare, part of the National Institutes of Health, and the U.S. Department of Agriculture, as well as by private organizations.

Media Office Can Help. Jentsch laid out a number of avenues of response to such threats. In 2009, Jentsch and others formed Pro-Test for Science, modeled after a group in the United Kingdom that advocates for animal research. He also serves on the board of directors of Americans for Medical Progress (www.amprogress) and is a member of the executive committee of Speaking of Research (http://speakingofresearch.com).

“First and foremost, the leaders of our academic institutions should, without hesitation, support the research programs at the university and the investigators who do them,” he said, urging investigators at the meeting to “go home today and talk with the members of your campus administration about what they’re going to do to promote the research agenda of their university.”

Yet this is a shared responsibility, Jentsch said. “You shouldn’t leave this task to them…you should take on the role because you are the scientist; it’s your work…. [A]bsent all these other issues, the public supports the work that we do [through] a very large investment in the National Science Foundation, National Institutes of Health…and have a right to understand what we do and why.”

Remember that journalists have an important role to play, in helping to explain to the public where their tax dollars are going, Jentsch said. “Work with the media offices and make sure they know of scientists who will openly discuss research,”

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Jentsch said. “Use these methods to coordinate effective public outreach about the research that’s being carried out at your university. Collaborate with the media relations office at your university. Ask them for help and advice, but don’t shy away from speaking for yourself. Use the mechanisms the campus has to describe what’s going on, describe what the benefits are, and describe how you have actually adjusted and refined your research to actually attend to things like animal welfare. You can take a visible role yourself. Speak openly about what you do, given the chance.” Researchers uncomfortable talking directly to the media can express themselves in other ways, including by issuing “controlled messages,” such as opinion pieces to run in daily newspapers or on blogs, Jentsch suggested.

Ultimately, the battle must be waged, he said. “We have to be forceful, we have to be persistent, organized, and thoughtful, and most importantly, we need to take the messages we’ve heard here home and spread them as widely as possible,” Jentsch said. “It’s up to scientists and people who work in the scientific enterprise to do this.”

Where to Go for Help

The following is a list of some organizations, both in the United States and abroad, that support animal research. The brief descriptions are from the organizations’ websites.

◆ Pro-Test, www.pro-test.org.uk. “We are an Oxford-based group campaigning in favour of continued animal testing and in support of scientific research. We aim to dispel the irrational myths promoted by antivivisectionists and to encourage people to stand up for science and human progress.”

◆ Pro-Test for Science, www.ucla-pro-test.org. “Following in the footsteps of the Pro-Test Group in Oxford, U.K., students and scientists at UCLA have pledged to stand up against the lies and misinformation of animal rights groups, and the violence of extremist organizations. They have formed the group Pro-Test for Science (formerly UCLA Pro-Test), which stands for science, reasoned discourse, and the belief that life-saving medical research must continue without violence and harassment.”

◆ Americans for Medical Progress, www.amprogress.org. “We focus on public outreach that builds understanding and appreciation for necessary and humane animal research. We also provide vital news, information and analysis to biomedical research stakeholders to ensure they have the resources they need to deflect campaigns that threaten the future of medical progress.”

◆ Society for Neuroscience, www.sfn.org/animals. “SfN supports the responsible use of animals in research and provides various resources for members who use animals for research purposes. In addition, SfN participates in various outreach efforts and educational initiatives to help explain to the public the positive impact of the use of animals in research.”

◆ Speaking of Research, http://speakingofresearch.com. “Speaking of Research is a campus-oriented group in the United States that seeks to provide university
students and faculty with accurate information and resources about the importance of animal research in medical science.”

♦ National Association for Biomedical Research, www.nabr.org. “Founded in 1979,… NABR provides the unified voice for the scientific community on legislative and regulatory matters affecting laboratory animal research. NABR works to safeguard the future of biomedical research on behalf of its more than 300 public and private universities, medical and veterinary schools, teaching hospitals, voluntary health agencies, professional societies, pharmaceutical and biotech industries, and other animal research-related firms.”

♦ Foundation for Biomedical Research, www.fbresearch.org. “Established in 1981,… FBR is the nation’s oldest and largest organization dedicated to improving human and veterinary health by promoting public understanding and support for humane and responsible animal research. Through its innovative educational programs, FBR works to inform the news media, teachers, students and parents, pet owners, and other groups about the essential need for lab animals in medical and scientific research and discovery.”

♦ Pennsylvania Society of Biomedical Research, www.psbr.org. “PSBR was established by universities, medical schools, pharmaceutical firms, and professional societies in the Commonwealth to foster a better understanding of the benefits of biomedical research to human and animal health, as well as the necessity for the humane treatment of animals in such research. The society supports the responsible use of animals for essential medical research and education in the prevention and treatment of human and animal diseases.”

♦ Basel Declaration, www.basel-declaration.org. “During a two-day conference in Basel, around 80 life sciences researchers from Switzerland, Germany, Sweden, France, and Great Britain addressed the problems of animal research. The outcome of this meeting was the Basel Declaration, in which the conference scientists commit to a responsible approach to the handling of animals in animal research, acknowledge the 3R principles (Replace, Reduce, Refine) and also apply these principles at all times. At the same time, the signatories of the declaration emphasize that necessary research involving animals remain[s] allowed now and in the future.”
3330.4 **Tips for Internal Controls for Use of Travel Cards**

AIS editors

The Department of Health and Human Services (HHS) Office of Inspector General (OIG) recently looked at the travel card practices of HHS employees to determine the extent to which the travel card transactions that employees made in 2007 constitute misuse and whether travel card internal controls, such as guidance, training, transaction reviews, and follow-up actions, work as intended to prevent or address misuse.1 Perhaps the OIG’s findings and suggestions could serve as useful advice for research administrators who oversee use of travel cards at their institutions.

Types of internal controls for travel cards include the following:
- Written policies and procedures for the appropriate use
- Training frequency and content for program coordinators/administrators, approving officials (typically cardholder supervisors), and cardholders
- Risk management controls ranging from general (e.g., ensuring that practices to mitigate risks associated with the charge card program are carried out) to specific (e.g., reviewing transactions to detect instances of misuse)
- Administrative and disciplinary actions that may be imposed to address misuse

**Suggestions to Improve Internal Controls**

◆ Review travel card program guidance. (The guidance could include specific examples of unallowable purchases with the travel card, a discussion of the actions that will be taken (and penalties imposed, if appropriate) for specific travel card misuses; and instructions for reporting travel card misuse. Consider developing a “Travel Card Do’s & Don’ts.”)

◆ Beef up travel card program training. (Training should be provided for users and supervisors/administrators who are responsible for reviewing and monitoring cardholder activities,

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<tr>
<th>Typical Travel Card Transactions</th>
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<tbody>
<tr>
<td>Hotels</td>
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<tr>
<td>Airline tickets</td>
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<tr>
<td>Other travel</td>
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<tr>
<td>Money (e.g., cash advances)</td>
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<tr>
<td>Rental cars</td>
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<tr>
<td>Eating/drinking</td>
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<tr>
<td>Vehicle expenses</td>
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<tr>
<td>Business expenses/office supplies</td>
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including flagging occurrences of misuse. Determine what training frequency and
documentation is most appropriate. Be sure the training meets each group’s needs.
For example, supervisors may need advice on how to spot and respond to misuse.)

◆ Examine whether your methods used to identify misuse are appropriate. (For
example, are transaction dates being matched against travel dates? Automating
this practice could prove helpful.)

◆ Be sure to follow-up with staff members when misuse is identified.

◆ Remember that efforts to detect atypical purchases may not identify all misuse.
(For example, are program administrators looking to identify unusual merchants
or personal or suspicious or atypical purchases? Sometimes misuse at typical
travel merchants, such as airlines and hotels, may go undetected if you are looking
only for atypical merchants.)
§3330.5  **Flowchart for Submitting NSF’s Project Outcomes Report**

AIS editors

Section 7010 of the America COMPETES Act of 2007 (Public Law No. 110-69) requires that all final project reports and citations of published research documents resulting from research funded, in whole or in part, by the National Science Foundation, be made available to the public in a timely manner and in electronic form through a website.

NSF’s implementation of Section 7100 requires principal investigators to submit a brief (200–800 words) report within 90 days following expiration of the grant. A PI has the option to upload images. This report is in addition to, not in lieu of, the final project report. This report is a summary, prepared specifically for the public, of the nature and outcomes of the project. This report will be posted in the “Research Spending and Results” section of www.research.gov.

NSF notes that the report, which it calls the “project outcomes report,” will be uploaded and publicly available — exactly as it is submitted. It will carry the following disclaimer: “The Project Outcomes Report for the General Public is displayed verbatim as submitted by the Principle Investigator (PI) for this award. Any opinions, findings, and conclusions or recommendations expressed in this Report are those of the PI and do not necessarily reflect the views of the National Science Foundation; NSF has not approved or endorsed its content.”

PIs are permitted to modify a submitted report for up to 30 days after submission. After 30 days, modifications to reports can be made by adding an unlimited number of addenda to the original report.

**Report Contents**

NSF’s *Proposal and Award Policies & Procedures Guide* outlines the requirement for PIs (see www.nsf.gov/pubs/policydocs/pappguide/nsf11001/index.jsp). The report should contain the following content:

- Outcomes/findings that address the intellectual merit and broader impacts of the NSF-funded activity as defined in the NSF merit review criteria. This description should be a brief (generally, two to three paragraphs) summary of the project’s results that is written for the lay reader. PIs are strongly encouraged to avoid use of jargon, terms of art, or acronyms.

- Products that have resulted from the award (collections, data sets, software, educational material, etc.). (NSF will automatically include all publications that are provided regarding the award in the FastLane project reporting system.)

- Additional information. Information regarding anticipated publication of project results, as well as any other information that would be of interest to the public also may be included in this section.
Report should not contain the following types of information:

- Confidential, proprietary business information
- Unpublished conclusions or data that could compromise ability to publish results
- Invention disclosures that might adversely affect patent rights
- Private personally identifiable information such as home contact information, individual demographic data or individually identifiable information collected from human research participants.

A flowchart of the process provided by NSF for submitting the project outcomes report is included at Figure 3330.5-1.

**Figure 3330.5-1: How to Submit an NSF Project Outcomes Report**
Statistics and Survey Results

This section includes statistics and survey results relating to the spectrum of post-award services. These materials are culled from a variety of authoritative sources.

Snapshot of Faculty Burden Survey Results

AIS editors

The Federal Demonstration Project (FDP) undertook a first of its kind “Faculty Workload Survey” — or faculty burden survey — to gauge how much time faculty researchers spend on activities relating to research administration. According to the final survey report’s Executive Summary,

The most striking aspect of the survey’s results was the general uniformity of responses that pointed to a high level of administrative burden and low level of research-project assistance. Multiple discrete activities linked to federal research-grant management appear to create a cumulative burden that in turn reduces the amount of time available to faculty to actively engage in research. … The data clearly show that the level of administrative burden is high enough to routinely take our nation’s most qualified scientists away from their research for significant amounts of time.

Research administrators may be interested in the survey results in that they likely share many of the same administrative challenges and frustrations, and of course assisting principal investigators in furthering their research is one of the primary duties of research administration.

A few of the survey findings follow. (See Figure 3360.1-1.) For a copy of the final survey report, which includes suggestions for steps to address the problems identified both within institutions and federal sponsoring agencies, go to at www.thefdp.org/Faculty_Committee.html#P11_2305. (The report is divided into five separate documents: the report itself and four appendices.)

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Figure 3360.1-1: Key Results of FDP Faculty Burden Survey

Overview of Survey Respondents

◆ Fall 2005: survey yielded 6,081 valid responses from faculty at FDP institutions
◆ 90% of faculty were principal investigators (PIs); 10% co-PIs only
◆ Mostly white, male, scientists from large research institutions, often with affiliated medical schools
◆ Respondents spend a substantial amount of time on administrative tasks directly linked to their federal research projects
Figure 3360.1-1: Key Results of FDP Faculty Burden Survey (continued)

Faculty Time
◆ Respondents spent 58% of their time on research, with an additional 9% devoted to research service
◆ 65% of research time was spent on federally funded research projects. Of this time
  ▷ 42% is divided almost equally between pre- and post-award activities
  ▷ Active research consumed 58%
◆ 95% of respondents believed more time could be spent on active research if more assistance with research-related administrative tasks was available
◆ 76% of respondents indicated a willingness to re-allocate direct costs to provide for research-related administrative support

Top Burdens Overall
◆ No single dominant burden, but the top burdens identified were
  ▷ Grant progress report submission
  ▷ Personnel hiring
  ▷ Project revenue management
  ▷ Equipment/supply purchases
  ▷ IRB protocols and training
  ▷ Training personnel and students
  ▷ Personnel evaluations
◆ Noted was the “cumulative” effect of the burdens

Sources of Administration Burdens
◆ No single “culprit”; burdens come from many sources including
  ▷ Federal regulations
  ▷ Agency implementations of regulations
  ▷ Institutional implementations of regulations
  ▷ Fear of audits; lack of consistency
  ▷ Inherent part of doing research
  ▷ Lack of project-specific research administration support

Determining Best Practices in Effort-Reporting Compliance
Ashley E. Whitaker, Nova Southeastern University

Abstract
Effort-reporting compliance at higher education institutions was examined to discern best practices from those that would recommend their effort-reporting process. Data were derived from a survey of effort administrators—the research administrators responsible for the effort-reporting compliance program at their respective higher education institutions. The research was conducted in the fall of 2012, before the implementation of the OMB (2013) Uniform Guidance. Data were separated into two focus groups for greater applicability: Doctoral/Research Universities (DRUs) and Predominantly Undergraduate Institutions (PUIs). These effort administrators were generally confident about their institution’s compliance with current effort-reporting regulations and believed that, even aside from the regulations, they properly documented compensation costs charged to sponsoring agencies. These data provide information on best practices in effort-reporting compliance for these two types of higher education institutions and expand the body of knowledge in the field of research administration. Data derived from this study can also be used as a baseline from which to compare future studies on effort-reporting compliance after the implementation of the OMB (2013) Uniform Guidance.

Introduction
Effort reporting is one of the most challenging compliance areas faced by research administrators. Effort reporting, or documenting compensation for personnel services, is a federal requirement mandating institutions to verify that personnel costs on sponsored projects are reasonable when taking into account the actual work performed on the project (Anthony & Gindhart, 2009; Council on Government Relations, 2007). The process of reporting effort also verifies that time commitments made to a sponsoring agency are met. Personnel charges typically represent a large portion of sponsored project costs. Auditors have always focused on effort reporting, but there has been a recent increase in auditor oversight due to federal audit findings and multimillion dollar settlements, institutional disclosures, and whistleblower lawsuits brought under the False Claims Act (1863); these have created concerns that the policies and procedures in place at universities are inadequate or out of compliance (Blevens, 2013; Council on Governmental Relations, 2007; Fife, 2006). An examination of the Summary of University Audits, Settlements and Investigations Related to Federal Programs (Blevens, 2013) shows that effort-reporting findings represent the largest proportion, constituting over 25% of all compliance areas. Effort-reporting findings in annual A-133 audits, high-profile large settlements, and false-claims whistleblower lawsuits have motivated continued auditor oversight of universities (Fife, 2006; Stanley & McCartney, 2009). These circumstances demonstrate the need for universities to have a sound effort reporting compliance program.

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At the time of this study, the federal requirements governing compensation for personnel services were found in the U.S. Office of Management and Budget (OMB) Circular A-21, section J.10, *Cost Principles for Educational Institutions* (OMB, 2004). The federal regulations for compensation costs have since changed to the OMB (2013) *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards*, “Uniform Guidance,” section 200.430. Based on either set of requirements, a sound effort-reporting compliance program should have a policy, procedure, and system that address the federal requirements. Continued from Circular A-21 (2004) to the OMB (2013) Uniform Guidance, is a required “after-the-fact” review process of personnel costs, versus relying on budget estimates to document costs. Further, it is expressed in both documents that costs must be reasonable, accurate, and based on all activities represented in an employee’s institutional-based salary. With the new focus on stringent internal controls in OMB (2013) Uniform Guidance, institutions should continue vigilance to ensure they have a strong effort-reporting compliance program.

External monitoring programs cannot be solely relied upon to ensure compliance (Fedor, Yaussy, & Cola, 2008). Compliance programs should be implemented into daily operations and the policies and procedures put in place to foster compliance should be followed (Saputelli & Smith, 2010). An effective compliance program serves to protect an institution from liability, mitigate risk, and foster the proper stewardship of external funds and institutional resources (Erickson & Tangredi-Hannon, 2006). The assessment of compliance programs at an institution must be a constant priority and continually monitored (Erickson & Tangredi-Hannon, 2006). Effective programs should ultimately lessen administrative burdens while allowing for the early identification and prevention of issues (Fedor et al., 2008). The increase in compliance costs is a large component of research and development expenses for higher education institutions; streamlining regulations is a way to decrease these costs for all higher education institutions (National Science Board, 2012). Rockwell (2009) noted that universities “go beyond the regulations” (p. 36) because they experience an audit, fear they will be audited, or have different interpretations by auditors, thus further exacerbating administrative burdens. Developing and utilizing best practices are one way that institutions can work together to lessen administrative burdens (National Science Board, 2014).

Institutions can point to multiple resources for developing sound compliance programs. For example, the Draft OIG Compliance Program (2005) for recipients of Public Health Service awards offered the following guidance for a good compliance program as a means to promote strong internal controls:

1. Implementing written policies and procedures,
2. Designating a compliance officer and compliance committee,
3. Conducting effective training and education,
4. Developing effective lines of communication,
5. Conducting internal monitoring and auditing,
6. Enforcing standards through well-publicized disciplinary guidelines,  
7. Responding promptly to detected problems and undertaking corrective action, and  
8. Defining roles and responsibilities and assigning oversight responsibility (p. 71313).

The two internal control documents cited in the OMB (2013) Uniform Guidance, Internal Control Integrated Framework, issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and Standards for Internal Control in the Federal Government, issued by the Comptroller General of the United States, are provided for best-practice guidance and can also be used to design a sound effort-reporting compliance program (Committee of Sponsoring Organizations, 2013; Comptroller General of the United States, 2014; Office of Management and Budget, 2014). Internal control is defined as “a process effected by an entity’s oversight body, management, and other personnel that provides reasonable assurance that the objectives of an entity will be achieved” (Comptroller General of the United States, 2014, p. 5). Strong internal controls ultimately allow institutions to quickly respond to change, such as the changes in regulation that the research community is now experiencing (Committee of Sponsoring Organizations, 2013).

Although the above examples are straightforward, achieving compliance is not. Research administrators still rely on their colleagues through listservs and conferences for assistance due to the ever-changing compliance environment and with specific areas of interest, such as effort reporting (Saputelli & Smith, 2010). The regulatory environment has evolved to have “strict” and “reactive” requirements that come with little guidance or time to implement (Saputelli & Smith, 2010, p. 23). Further, since the guidance is not always clear, institutions are responsible for clarifying some information in their policies (Saputelli & Smith, 2010). Due to this ambiguity, best practices are essential to developing or evaluating a compliance program. Best practices have changed over the past ten years due to new competitors, pressures from the government on “cost containment,” increased regulatory oversight by sponsors, and the technology age (Kirby & Waugaman, 2005, p. 5).

A goal of this study was to assist in identifying best practices by examining some of the common issues that institutions must address when designing an effort reporting compliance program. Further, since institutions are unique in their size and culture, there is no one best compliance program (Draft OIG Compliance, 2005). As such, this paper summarizes the effort-reporting characteristics of a sampling of Doctoral/Research Universities (DRUs) and Predominantly Undergraduate Institutions (PUI) that would recommend their effort-reporting process as a means of identifying best practices in effort-reporting compliance for these types of institutions. A DRU is defined as a higher education institution that awards at least 20 research doctoral degrees (adapted from Carnegie Foundation for the Advancement of Teaching, n.d.). A PUI is defined by the National Council of University Research Administrators (NCURA, 2013) as follows:

The PUI Neighborhood members provide research administration information to our colleagues at “predominantly undergraduate institutions”—two-year, four-year, masters-level, and small doctoral
colleges and universities that grant baccalaureate degrees, or provide programs of instruction for students pursuing such degrees with institutional transfers (e.g., two-year schools), where undergraduate enrollment exceeds graduate enrollment, and no more than 10 Ph.D. or D.Sc. degrees are awarded per year (adapted from the National Science Foundation’s description of PUIs) (para. 12).

**Methods**

Study participants were research administrators responsible for the effort-reporting compliance program at their respective higher education institutions (i.e., effort administrators). Participants were recruited from both the REASADM-L Research Administration Discussion List listserv and three of NCURA’s Collaborate membership communities (Predominantly Undergraduate Institutions, Compliance, and Financial Research) in order to access the largest number of eligible respondents from the population. To further expand the number of participants, listserv and community members were encouraged to send the survey communication on to the appropriate person at their institution. The sample was drawn from this proportion of the population of effort administrators and was composed of those individuals who completed the web-based survey. Nonprobability sampling was utilized since the groups described above were used to collect the sample and it was not known if all universities subject to effort-reporting requirements were represented in these groups. A random sampling method was used because the respondents were only sought out via the groups and not individually selected to participate in the study. The survey was anonymous; no identifying information was collected on the participants or their institutions. The number of participants was not limited in this study.

Demographic information was collected on both the institutions and individual respondents. The institutional information collected included institutional classification (Doctoral/Research University, Master’s College or University, Predominantly Undergraduate Institution, Associate’s or Technical College, or Other), public versus private status, total amount of annual sponsored funding expenditures, and the office that oversaw effort reporting. Respondent information collected was the respondent’s position title and years of experience working in effort administration. Institutions were grouped by their institutional classification in order to compare types of institutions.

The instrument was a web-based questionnaire using the Survey Gizmo software program and consisted of predominantly closed-ended questions, with a small number of semi-closed-ended questions and one open-ended question. The instrument was separated into four sections consisting of demographic data, current data on the institution’s effort-reporting compliance program, data on past audit influences, and perceptions of future changes to the effort-reporting regulations. The survey was preceded by a participant letter that included a participant rights statement and statement of consent. The survey adhered to Nova Southeastern University Institutional Review Board consent compliance requirements, and all applicable information was included in the e-mail invitation and survey introduction.
A cross-sectional survey design was used in this study. On September 25, 2012, an e-mail invitation to participate in the research study was sent to the REASADM-L listserv and posted in the three NCURA Collaborate communities. In order to prevent multiple individuals from responding to the survey from the same institution, the invitation to participate in the study specified that only the person responsible for effort-reporting compliance for the institution was eligible to take the survey. Users were limited from responding to the survey more than once by using software features. The invitation directed eligible participants to a link to the survey instrument. To reduce nonresponse error and ensure a high response rate was received, a follow-up invitation was sent one week following the initial invitation on October 2, 2012. A final request was sent two weeks following the initial invitation on October 9, 2012.

Each of the survey question response choices was coded prior to the data being collected. Once collected, the data were exported to the IBM Corporation’s SPSS (Versions 20 and 21) software for analysis. The response rate was not calculated because the number of eligible respondents could not be calculated since the number of eligible potential respondents was not known. To determine best-practice characteristics of effort-reporting compliance programs by type of institution, the data from respondents who indicated that they would recommend their effort-reporting process were separated from the master data set and then further divided into two groups, Doctoral Research Universities (DRU) and Predominantly Undergraduate Institutions (PUI). All variables were covered individually by the survey questions and percentages were calculated based on the strength of the responses to the variables. Descriptive statistics were also used to analyze the variables; frequencies on the responses were calculated.

A total of 114 responses were received. Of these, eight responses (six complete and two partial) were ineligible for the survey because they were not self-classified as institutions of higher education; these responses were omitted from data analysis. Of the 106 remaining responses, 38 were partial responses for which not enough data were collected and thus were discarded from the final analysis. The analyzed responses resulted in 67 or 68, depending on the variable. Two classifications of higher education institutions (DRUs and PUIs) represented the majority of institutions in this study (91.1% or 62 institutions). Of the 68 total institutions represented in the analysis, only 30 or 44.1% of respondents would recommend their effort-reporting process to others (variable: pREC). Of these 30 institutions, 28 were DRUs and PUIs with an equal number representing each group. A higher percentage of DRU respondents (14 of 19 institutions or 73.6%) would recommend their effort-reporting process than PUIs (14 of 43 institutions or 32.5%). The results presented here on DRUs and PUIs are specific to only those respondents who would recommend their institution’s effort-reporting process.

Results
Results are designed to shed light on best practices among DRUs and PUIs that can be adopted by other institutions looking to update their effort-reporting compliance
program. This analysis was conducted separately for both DRUs and PUIs to identify best practices for each type of institution. Throughout this section, variable labels are listed in parentheses.

The first section of the survey instrument collected demographic data on the types of respondents (position title), their institutions (public versus private status and research expenditures), and the respondent institution’s effort-reporting compliance program (office that oversaw effort reporting, effort-reporting system, OMB Circular A-21 method, frequency of certification, number of effort certifications per reporting period, and source of funding reported on). Most DRU respondents were public institutions (78.6%; d3). As expected, they reported higher research expenditures and effort certifications for their institution than PUIs (d5, d11). They expended more than $10 million in research expenditures for the last fiscal year, with most over $50 million (d5). This correlates with a higher number of effort certifications; they all reported above 500 certifications per the institutionally specified certification period, and the majority reported over 1,000 (78.6%; d11). Further, effort-reporting compliance programs were most often administered at DRUs by a central effort administrator (42.9%) with the next highest response being a central post-award research administrator (21.4%; d1). They were divided by which office oversaw effort reporting, with the sponsored accounting offices a slight majority (57.1%; d6) over sponsored programs offices (42.9%; d6). Most DRU respondents indicated that their institution used a software system to report effort; an equal number of institutions chose off-the-shelf software and institutionally developed software (85.8%; d8). The majority (64.3%; d9) of DRU respondents indicated an after-the-fact method for reporting effort. DRU respondents were divided on the frequency of certification at their institutions. The most common response was semiannually (42.9%; d10). Finally, almost all DRU respondents indicated that their institution reported effort for all sponsored funding (versus only federal funding or federal and state funding; 92.9%; d12).

Most PUI respondents were public institutions (64.3%; d3). As expected, PUI respondents reported lower research expenditures and effort certifications for their institutions than DRU respondents (d5, d11). Most PUI respondents indicated that their institutions expended less than $50 million in funds for research in the last fiscal year, with half of these respondents reporting under $5 million (d5). This correlates with a lower number of effort certifications, with 85.7% having fewer than 1,000 certifications per certification period and 71.4% having even fewer than 500 (d11). A clear trend was not observed on who administered effort-reporting compliance programs at these PUIs, although the most common positions included a central effort administrator, noneffort specific post-award research administrator, and generalist research administrator with varying functions (d1). PUI respondents were also divided about which office oversaw effort reporting at their institutions—sponsored programs offices were the majority, at 64.3%, followed by sponsored accounting offices at 28.6% (d6). In contrast to the DRU respondents, only half of PUI respondents used a software system at their institution, and the others utilized paper (both 42.9%; d8). The majority (85.7%) of PUI respondents used an after-the-
fact method for reporting effort at their institutions (d9), although they were mixed on the frequency of certification (d10). Finally, PUI respondents differed from DRU respondents in regard to types of sponsored funding reported—64.3% reported effort for all sponsored funding, 14.3% reported on federal and state funding only, and 21.4% reported on federal funding only (d12).

The second aspect of the survey collected current data on institutions’ effort-reporting compliance programs. Factors included: having an effort policy (c1), defining who can attest to effort or “suitable means of verification” (c2), allowance of certification by administrators (c3), training (c4), consequences in place for those that do not certify (c5), process in place to track late or overdue statements (c6), commitment management (c7), maximum effort policy (c8), minimum policy for principal investigators (c9), defining significant change per OMB Circular A-21 (c10), are sponsors charged correctly (c11), conducts independent internal evaluations (c12), timeliness of certification (c13), and allowance of recertification of effort (c14). In addition, the following self-analysis questions were examined: overall OMB Circular A-21 compliance (c15), having no federal audit findings (c16), having accurate certification (c17), and having an effective compliance program (c18). DRU respondents who would recommend their effort-reporting process demonstrated best practices on which other institutions could model their effort-reporting compliance programs (Figure 3360.2-1). All of these respondents reported having an effort-reporting policy and conducted independent internal evaluations (c1, c12). The majority defined in their policy who could attest to effort or, who had suitable means of verification (78.6%; c2), and what constituted a significant change per OMB Circular A-21 requirements (71.4%; c10). DRU policies did not let administrators certify another individual’s effort for which they did not have suitable means of verification (71.4%) or they allowed it only with supporting documentation (21.4%; c3). A formal training program on effort reporting was also common at DRUs (85.7%) although the trend was towards a non-mandatory program (64.3% versus 21.4%; c4). A slight majority reported that their institution had consequences in place for those who failed to certify effort (57.1%; c5). Almost all respondents said they tracked down late or overdue statements to achieve compliance (92.9%; c6). DRU respondents also managed commitments of effort (85.7%; c7) with the majority having a policy on minimum effort (specific to Principal Investigators; 64.3%; c9) and maximum effort (78.6%; c8) charged to sponsored projects. The majority of effort certifications at their institutions were completed on time (71.4%; c13). However, responses were mixed regarding the allowance of recertification, indicating no clear trend (c14).

PUI respondents who would recommend their effort-reporting process also demonstrated best practices for that process (Figure 3360.2-2). Similar to DRU respondents, almost all reported that their institution had an effort-reporting policy and conducted independent internal evaluations (both 92.9%; c1, c12) although there were mixed results about providing a definition of suitable means of verification in that policy or who has suitable means of verification to certify effort (c2, d15). The majority of PUI respondents indicated that their institution defined what constituted a significant change (71.4%; c10). They also did not let administrators certify another
### Figure 3360.2-1. Practices of Doctoral Research University Respondents Who Would Recommend Their Effort-Reporting Process

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Percentage who Demonstrated the Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td>Effort policy</td>
<td>100.0</td>
</tr>
<tr>
<td>c2</td>
<td>Define suitable means of verification</td>
<td>78.6</td>
</tr>
<tr>
<td>c3</td>
<td>Do not allow certification by administrators</td>
<td>71.4</td>
</tr>
<tr>
<td>c4</td>
<td>Mandatory or non-mandatory training</td>
<td>85.7</td>
</tr>
<tr>
<td>c5</td>
<td>Consequences for not certifying</td>
<td>57.1</td>
</tr>
<tr>
<td>c6</td>
<td>Track late or overdue statements</td>
<td>92.9</td>
</tr>
<tr>
<td>c7</td>
<td>Commitment management</td>
<td>85.7</td>
</tr>
<tr>
<td>c8</td>
<td>Maximum effort policy</td>
<td>78.6</td>
</tr>
<tr>
<td>c9</td>
<td>Minimum principal investigator effort policy</td>
<td>64.3</td>
</tr>
<tr>
<td>c10</td>
<td>Defining significant change</td>
<td>71.4</td>
</tr>
<tr>
<td>c12</td>
<td>Conducts independent internal evaluations</td>
<td>100.0</td>
</tr>
<tr>
<td>c13</td>
<td>Timeliness</td>
<td>71.4</td>
</tr>
</tbody>
</table>

Note: For Variable c3, an additional 21.4% would allow certification by administrators with supporting documentation. For Variable c13, the response choices always, very often, and fairly often are included in the percentage.

### Figure 3360.2-2. Practices of Predominantly Undergraduate Institution Respondents Who Would Recommend Their Effort-Reporting Process

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Percentage who Demonstrated the Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>c1</td>
<td>Effort policy</td>
<td>92.9</td>
</tr>
<tr>
<td>c2</td>
<td>Define suitable means of verification</td>
<td>42.9</td>
</tr>
<tr>
<td>c3</td>
<td>Do not allow certification by administrators</td>
<td>85.7</td>
</tr>
<tr>
<td>c4</td>
<td>Mandatory or non-mandatory training</td>
<td>64.3</td>
</tr>
<tr>
<td>c5</td>
<td>Consequences for not certifying</td>
<td>50.0</td>
</tr>
<tr>
<td>c6</td>
<td>Track late or overdue statements</td>
<td>100.0</td>
</tr>
<tr>
<td>c7</td>
<td>Commitment management</td>
<td>84.6</td>
</tr>
<tr>
<td>c8</td>
<td>Maximum effort policy</td>
<td>21.4</td>
</tr>
<tr>
<td>c9</td>
<td>Minimum principal investigator effort policy</td>
<td>42.9</td>
</tr>
<tr>
<td>c10</td>
<td>Defining significant change</td>
<td>71.4</td>
</tr>
<tr>
<td>c12</td>
<td>Conducts independent internal evaluations</td>
<td>92.9</td>
</tr>
<tr>
<td>c13</td>
<td>Timeliness</td>
<td>71.4</td>
</tr>
</tbody>
</table>

Note: For Variable c3, an additional 14.3% would allow certification by administrators with supporting documentation. For variable c13, the always, very often, and fairly often response choices are included in the percentage.
individual’s effort for which they did not have suitable means of verification (85.7%, 14.3% allowed only with supporting documentation; c3). No trends were observed with regard to a formal effort-reporting training program (c4) or having consequences in place for those who did not certify effort (c5). All respondents indicated that their institution tracked down late or overdue statements to achieve compliance (c6). Like DRU respondents, the majority of PUIs formally managed commitments at their institutions (84.6%; c7), but in contrast to the DRU respondents, PUIs did not have policies on minimum or maximum effort (57.1% and 78.6%, respectively; c9, c8). They were positive with regard to timely completion of effort certifications at their institutions (71.4%; c13). However, responses were mixed regarding the allowance of recertification, indicating no clear trend (c14).

The next set of variables analyzed represented self-analysis questions (Figure 3360.2-3). Most DRU respondents indicated that the salary compensation charged to sponsors was an accurate reflection of the effort certified at their institution (78.6%; c11), with the rest indicating a neutral response. Almost all agreed that their institution’s effort-reporting compliance program met the requirements in OMB (2004) Circular A-21 (92.9%; c15) and almost all were neutral or positive in response to “my institution’s effort reporting compliance program would have no significant findings in a federal audit” (57.1% positive and 35.7% neutral; c16). Overall, these answers reflected confidence by DRU respondents in their institution’s compliance program. These respondents agreed or strongly agreed that effort was certified accurately at their institutions (78.6%; c17) and their effort-reporting compliance program was effective in documenting personnel expenses on sponsored projects aside from the federal effort-reporting regulations (100%; c18).

Most of the PUI respondents indicated that the salary compensation charged to sponsors was an accurate reflection of the effort certified at their institutions (78.6%) with the rest of the institutions indicating a neutral response (c11). All PUI respondents agreed or strongly agreed that their institution’s effort-reporting compliance program met the requirements in OMB (2004) Circular A-21 (c15). Most agreed or strongly agreed that their institution would have no significant findings in a federal

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Percentage of DRUs that responded positively</th>
<th>Percentage of PUIs that responded positively</th>
</tr>
</thead>
<tbody>
<tr>
<td>c11</td>
<td>Sponsors charged correctly</td>
<td>78.6</td>
<td>78.6</td>
</tr>
<tr>
<td>c15</td>
<td>A-21 compliant</td>
<td>92.9</td>
<td>100.0</td>
</tr>
<tr>
<td>c16</td>
<td>Would have no federal audit findings</td>
<td>57.1</td>
<td>78.6</td>
</tr>
<tr>
<td>c17</td>
<td>Accurate certification</td>
<td>78.6</td>
<td>85.7</td>
</tr>
<tr>
<td>c18</td>
<td>Effective compliance program</td>
<td>100.0</td>
<td>85.7</td>
</tr>
</tbody>
</table>

Note: DRU = doctoral research university; PUI = predominantly undergraduate university. For all PUI variables, the rest of the responses were neutral (no respondents disagreed with the statement). This same statement applies to variable c11 of the DRU responses. For variable c16 of the DRU responses, 35.7% indicated a neutral response.
audit (78.6%), with the rest indicating a neutral response (c16). Similar to the DRU respondents, the PUIs who would recommend their institution’s effort-reporting process were confident in their compliance program. These PUI respondents agreed or strongly agreed that effort was certified accurately at their institutions (85.7%), with the rest indicating a neutral response (c17). Similarly, PUI respondents agreed or strongly agreed that their institution’s effort-reporting compliance program was effective in documenting personnel expenses on sponsored projects aside from the federal effort-reporting regulations (85.7%), with all others indicating a neutral response (c18).

To put the above practices into context, the third aspect of the survey collected data on past audit influences. Factors included: audit findings (aFIND), change made to their compliance program due to an audit finding (aCHANGE), change due to fear of future audit (aFEAR); and change to an adopted electronic system (aELEC). The variables were weighted equally, ranging from 0 (no finding; no change) to 1 (finding; change). No further statistical tests were needed as each variable served as a separate indicator of audit influence. About half of DRU respondents reported having significant findings at their institution related to effort reporting in the past (aFIND). Most DRU respondents changed their effort-reporting compliance program in the past ten years due to the fear of being audited in the future (85.7%; aFEAR). Further, most DRU respondents noted a change in their institution’s effort-reporting compliance program in the past ten years to adopt an electronic system (85.7%; aELEC).

In contrast to DRUs, the majority of PUI respondents indicated that their institution had not had a significant finding related to effort reporting (92.3%; aFIND). This result was not surprising as it was assumed most PUI institutions, due to the level of funding, did not have a high audit risk. Only about half of PUI respondents indicated that their institution had changed their effort-reporting compliance program in the past ten years due to the fear of being audited in the future, with most others indicating a neutral response (aFEAR). Interestingly, these respondents were divided at opposite ends of the spectrum about whether their institution changed its effort-reporting compliance program in the past ten years to adopt an electronic system; 35.7% answered definitely false and 42.9% answered definitely true (aELEC).

The final section of the survey instrument collected data on perceptions of effort administrators on future changes to the effort-reporting regulations, since the data collected predated publication of the OMB (2013) Uniform Guidance. Factors included: satisfaction with current process (pSAT), concern regarding investment in a new system (pINVEST), and stay with current process (pSTAY). The variable, “would you recommend your institution’s effort reporting process to others” (pREC), was also included in this section. The questions were scored with equal weight from 0 to 1 with a higher score indicating a more positive response towards the variable. No further statistical tests were needed as each variable served as a separate indicator on perceptions of effort administrators on future changes to the effort-reporting regulations.

All DRU respondents reported being satisfied with their institution’s effort-re-
porting process (somewhat to very satisfied; pSAT). Given their institutional leadership, all except one of DRU respondents (who did not know) would likely stay with their institution’s current effort-reporting process if the regulations changed (pSTAY). Most of these respondents indicated at least some level of concern about the investment in resources and costs of implementing a new effort-reporting system (92.9%; pINVEST).

Similarly, almost all PUI respondents reported being satisfied with their current effort-reporting process (92.9% somewhat to very satisfied; pSAT). Given their institutional leadership, 85.7% of PUI respondents indicated that it was very likely that they would stay with their current effort-reporting process if the regulations changed, with the rest indicating that they were unsure (pSTAY). Most of these respondents (85.7%) noted at least some level of concern about the investment in resources and costs of implementing a new effort-reporting system (pINVEST).

Overall, these results demonstrate the vast difference between DRUs and PUIs, but also indicate some notable similarities between the two types of institutions. The DRU and PUI respondents who would recommend their effort-reporting process were understandably confident in their effort-reporting compliance programs’ basis on self-analysis questions (Table 3). The differences between the effort-reporting practices at these DRU and PUIs can most likely be explained by the varying resources and emphasis placed on research at these institutions. Further, given the lower amount of research expenditures reported at the PUIs than the DRUs, it makes sense that the PUIs would be less likely to have a significant audit finding related to effort. This is possibly another reason for the risk-assessment approach taken at a DRU versus a PUI.

Limitations
Since the data were self-reported, there is a possibility that participants could inflate their responses. It was assumed that the respondents responded honestly and accurately, which cannot be verified. Also, it was assumed that only one individual from an institution responded to the survey. By using research administration groups and a listserv to distribute the survey, there could be an association, although assumed to be minimal, of the membership of compliance-focused groups or subscription to a listserv as an indication of a high level of personal or institutional compliance. In addition, the analysis of data from those who would recommend their effort-reporting process to others was based on a small sample size and was subjective in that it only identified trends in these data as only one of many possible analyses to determine best practices in effort-reporting compliance.

Conclusion
This study expanded the body of knowledge in the field of research administration by examining effort-reporting compliance programs at both Doctoral Research Universities and Predominantly Undergraduate Institutions that would recommend their effort-reporting process. These effort administrators were generally confident that their institutions complied with the current regulations and, that their institution’s effort-reporting compliance programs properly documented personnel costs
to sponsored projects. Many institutions’ compliance programs reflected changes due to an audit finding or a fear of a future finding. No matter what the level of funding, all institutions that accept federal funds must ensure that they exercise proper stewardship of those funds and comply with the same set of regulations that govern research. Compliance programs are expensive; they require both financial and nonfinancial resources to operate in addition to an immense culture change. Institutions that accept federal funding must prioritize where their resources are best placed to ensure they are operating in the most efficient way possible. For example, tracking down late or overdue statements is an efficient way of ensuring compliance given the resources available. Institutions looking to update or enhance their effort-reporting compliance programs in light of the OMB (2013) Uniform Guidance can use these results as one set of best practices for developing or enhancing an effort-reporting compliance program.

**Recommendations for Further Study**

Future studies can be conducted to measure the impact of the OMB (2013) Uniform Guidance on effort-reporting compliance programs at higher education institutions in order to determine whether the regulatory changes result in more effective documentation of personnel costs charged to sponsored projects with fewer burdens on institutions. This research can also be carried into other compliance areas to determine best practices.

**Acknowledgments**

This paper was derived from findings from the author’s doctoral dissertation research. This research was presented at the annual meeting of the National Council of University Research Administrators (NCURA), Washington, DC, August 4–7, 2013, and the annual meeting of the NCURA Financial Research Administration Conference, San Francisco, CA, March 15–17, 2014. Special appreciation is extended to David Ngo (UT Southwestern Medical Center), Kristi Bazata (Columbia University), Kate Hayden (Brown University), and Cathy Harlan (Nova Southeastern University) for their thoughts and critiques on an earlier draft of this paper.

**Literature Cited**


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About the Author
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with effort-reporting compliance since 2008. This study came about as part of her applied dissertation research for a Doctor of Education degree with an expected completion date of May 2015.
Knowledge Check

The Q&As at §3390.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3300 has been understood. Note: For the answer key for §3390.1, see §3390.3, which appears on a separate page (page 3390:5) for testing purposes.

Discussion topics at §3390.2 are designed to engender dialogue among staff on general issues of importance in the field.

1. Which statement is generally NOT true about post-award administration?
   (a) There is no one correct way to organize the post-award functions of project administration.
   (b) Each institution must decide for itself what works best in its organizational structure and culture.
   (c) Organizational structure is particularly important in organizing the post-award function.
   (d) Post-award administration functions independent of pre-award in the most effective institutional set ups.

2. Prior approvals are necessary for
   (a) Some types of project or budgetary changes
   (b) Submitting closeout reports
   (c) Filing project reports
   (d) Subrecipient monitoring

3. In which of the following would you find the key requirements for post-award administration?
   (a) OMB Circular A-110
   (b) OMB Circular A-21
   (c) OMB Circular A-133
   (d) OMB Circular A-122

4. Program income can come in many forms including all of the following EXCEPT:
   (a) Fees for services performed
   (b) Sale of research materials
(c) Tuition remission
(d) Monies from participants at conferences

5. **In general, should an institution accept transferred awards?**
   (a) No and create established policies to state the reasons why.
   (b) Yes and create established policies to do so efficiently.
   (c) Yes, for first-time investigators only.
   (d) No, as they are not allowed under OMB Circular A-133.

6. **According to ¶3305, release time for faculty involved in research is often of particular concern to**
   (a) Institutions receiving primarily funding from NIH
   (b) Institutions receiving primarily funding from NSF
   (c) Primarily undergraduate institutions
   (d) Geographically isolated institutions

7. **An “Internal Notification of Award”**
   (a) Typically would be issued at closeout
   (b) Typically sets forth key information about the award
   (c) Typically provides instructions on navigating NIH Commons
   (d) Typically is signed by the sponsor

8. **Which of the following topics typically is NOT considered part of post-award administration?**
   (a) Award terms and conditions
   (b) Allowable costs and prior approvals
   (c) Effort certification and cost transfers
   (d) Training for application submissions

9. **What is fabricated equipment?**
   (a) An item of equipment that is built or assembled from individual parts by an investigator or other sponsored project personnel.
   (b) Equipment valued at greater than $10,000 and donated to a sponsored project.
   (c) An item of equipment not originally included on a project budget, but which is later added as an allowable expense under the award.
   (d) A piece of equipment with a set cost that includes shipping and handling.
13390.2 Discussion Topics

1. Concern about effort certification and cost transfers have been the subject of federal audits in recent years. What are the auditors looking for, what raises “red flags,” and how can an institution ensure that its policies in these areas are being followed properly?

2. Does your institution set a maximum percent of committed effort for a PI on a sponsored research project? How do you handle changes to effort commitments on existing projects?

3. What are some components of good “cash management” practices with respect to sponsored awards?

4. How might (or does) the increased use of more multidisciplinary, multiple PI awards impact post-award?

5. What information would you ideally want to receive from pre-award staff to make your job easier? How can you help ensure that this information is routinely shared with post-award administration?

6. What are your procedures in the event of a PI transfer? Under what circumstances would your institution not transfer an award in the event of a PI transfer?

7. How often do you review and update your grant closeout procedures?

8. How do you stay abreast of the Fly America Act, Open Skies Agreement, and other such legislation that may impact how you can charge travel costs under a federal award?

9. What role does your office play in the monitoring of subrecipients or subcontractors under a federal research award?

10. How do your management practices differ for a federal award versus an award from a private sponsor or a non-federal sponsor?

11. What kind of electronic system are you using to manage your awards? Is this system adequate, in your opinion? If not, what additional functionality would you like to see added to the system?

12. How do you handle PIs who are consistently late in submitting progress and final reports to sponsors? What impact on your operations do these type of actions by PIs have?

13. What role does the pre-award staff play in fulfilling the institution’s reporting requirements under the American Recovery and Reinvestment Act and the Federal Funding Accountability and Transparency Act?

14. How do you monitor your unit’s workload so as to best accommodate “spikes” and “lulls” in activity?
\section*{13390.3 \textit{Answer Key}}

Following are the correct answers to the questions included at \[13390.1.\]

1. (d) Post-award administration functions independent of pre-award in the most effective institutional set ups.

2. (a) Some types of project or budgetary changes

3. (a) OMB Circular A-110

4. (c) Tuition remission

5. (b) Yes and create established policies to do so efficiently.

6. (c) Primarily undergraduate institutions

7. (b) Typically sets forth key information about the award

8. (d) Training for application submissions

9. (a) An item of equipment that is built or assembled from individual parts by an investigator or other sponsored project personnel.
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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
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This chapter provides general descriptions of the requirements surrounding export controls and strategies for managing compliance.

Universities are generally thought to be places where open inquiry, discovery, and dissemination of information are essential characteristics of the environment. Most people who work in universities, research administrators included, do not believe that they are involved in “export” activities that need to be “controlled.” In this chapter, Susan Wyatt Sedwick of The University of Texas at Austin makes it quite clear that through the creation and dissemination of knowledge and information, universities may, indeed, be involved in “export” activities for which the government has a complex system of export control regulations in place that must be understood and followed.

Sedwick’s chapter provides an introduction into the world of the Commerce Department’s Export Administration Act, the Department of State’s International Traffic in Arms Regulations, and the Treasury Department’s Office of Foreign Assets Control. While all of these regulations have been in place for many years, it is only in the time after September 11, 2001, that they have begun to have a major impact on the university research enterprise. We can no longer assume that everything done on a university campus qualifies as “fundamental research” and, therefore, is exempt from the regulations.

Sedwick provides an explanation of the more complex and arcane aspects of export control regulations. The chapter includes a useful set of Web sites where additional information is available.

Chapter 3400 will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶3405, over time as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶3420), practical tools (at ¶3430), case studies (¶3440), statistics and survey results (at ¶3460) and a knowledge check (¶3490). A “knowledge check” containing Q&As and discussion topics is included at ¶3490.
Export Controls
Susan Wyatt Sedwick and David Ivey, The University of Texas at Austin

This chapter provides an overview of the requirements and federal agencies involved in implementing export control regulations. Also discussed are strategies for sponsored research offices to provide oversight or coordination with other offices to achieve compliance.

Although export controls, embargoes, and sanctions in the United States have been in place since the 1800s, the terrorist attacks in the United States on September 11, 2001, created a heightened awareness of the potential for the occurrence of violations associated with university research and other scholarly activities, especially in the area of sponsored projects and technology development.

While effective research administration offices have historically included export controls as a part of their compliance oversight activities, additional resources and staffing have been added on most campuses since 9/11 to ensure documentation of compliance efforts and minimize the risk of violations in response to increased scrutiny and enforcement by federal agencies.

Regulatory Framework

The goal of export control regulations is to help protect national security and play a role in preventing terrorist attacks and other illicit activities, such as proliferation of weapons of mass destruction. International obligations such as treaties and other agreements are fulfilled, in part, by export controls and sanctions. Enforcement of these restrictions on the export and import of goods and technologies that have the potential to contribute to the military vitality of our adversaries furthers national security goals.

The regulations have numerous implications for universities and their faculties. Compliance with export controls, embargoes, and sanctions may impact or restrict:

◆ Collaborations and discussions with foreign colleagues and students both in the United States and abroad
◆ Activities of visiting foreign scientists
◆ The sharing of data, software, and materials — such as biological materials through material transfer agreements
◆ Peer review of publications for foreign persons
◆ Travel to and research and fieldwork conducted in foreign countries
◆ The involvement of foreign students in research

Perhaps of greatest concern to institutions is the last item listed above, the implications the export controls have for foreign students involved in research.

While peer review of articles submitted to refereed journals may be provided as an exception to certain sanctions, in other circumstances the provision of anything of value, including professional feedback, is controlled for certain sanctioned countries. Fieldwork and other travel to and in foreign countries that requires transfer-
ring controlled items or technologies or performing defense-related services require licenses to avoid violations.

**Regulatory Oversight**

**Reminder**
What is an export? Under the EAR, any actual transmission or shipment of items out of the U.S. is an export. “Items” include equipment, material, software, and associated technology.

There are multiple laws, regulations, embargoes, and sanctions that could potentially apply to sponsored projects on university campuses. While it is important to recognize these terms as representing distinct and separate actions, collectively these are often referenced under the general rubric of export controls and a detailed discussion of the subtle nuances is not germane to this document.

The three sources of export controls that are most directly relevant for sponsored research administrators are the Export Administration Regulations (EAR), the International Traffic in Arms Regulations (ITAR), and the sanctions administered by the Office of Foreign Assets Control (OFAC). Figure 3405.1-1 illustrates the enabling legislation, responsible federal agency, specific Code of Federal Regulations (CFR) cite, and enumerating document for each. (A list of Web sites for the federal agencies and other sources is included as Figure 4, page 3405:16.)

**Figure 3405.1-1. Overview of the Export Control Regulations**

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¶3405.2 **Safeguarding Exclusions Specific to Universities**

During the Reagan Administration questions arose about access by foreign persons to controlled technologies, especially persons from countries that were Cold War adversaries. In response, several major research universities united and worked with the federal government to establish a national policy for controlling the flow and transfer of scientific, technical, and engineering information produced in federally funded “fundamental research” at colleges, universities, and laboratories.

**NSDD 189 and Fundamental Research**

This national policy is embodied in National Security Decision Directive (NSDD)
189, which defines fundamental research and provides a qualified exclusion from the export control regulations. NSDD 189 went virtually unquestioned until after 9/11, but it was reaffirmed by the George W. Bush Administration in a letter in November 2001 from Condoleezza Rice who was then the assistant to the president for national security affairs.

**As defined in NSDD 189, fundamental research is**

Basic and applied research in science and engineering, the results of which ordinarily are published and shared broadly within the scientific community, as distinguished from proprietary research and from industrial development, design, production and product utilization, the results of which ordinarily are restricted for proprietary or national security reasons.

Research conducted by university researchers and students normally will be considered fundamental research when the research is conducted “from scratch” from technologies and information available in the public domain, as long as there is the full intent to publish openly the results of the research. However, if a university accepts restrictions on the publication of results or use of foreign persons, the research does not qualify as “fundamental.” Researchers should be cautioned that “side deals” or verbal agreements to withhold publication of certain aspects of the research nullify the fundamental research exclusion.

**Reminder**

If restrictions on the publication of results or use of foreign persons are accepted under the terms of the research, the research does not qualify for exclusion as **fundamental research**.

Research requiring access to proprietary technology/information, source code, design specifications, and/or schematics may not qualify under the fundamental research exclusion, and it is imperative that a thorough review be conducted to determine if the information that is proprietary is controlled. However, it is possible to compartmentalize the fundamental aspect of the research that does not require such access and allow foreign persons to participate in that aspect of a project.

**Example**

A principal investigator may have access to controlled information or technology that would allow she or he to conduct additional analysis or interpretation of results based upon fundamental research conducted by foreign students. However, it would be important to have the principal investigator sign a certification of compliance with export controls acknowledging his or her willingness and ability to segregate those activities in compliance with regulatory requirements.

**Educational Information**

While subtle differences in the definitions of fundamental research as contained in the EAR and ITAR do exist, the exclusion of fundamental research from the jurisdiction of export controls applies to basic and applied research at an institution of higher education in the United States on which no restrictions on the publication of the results or use of foreign persons has been imposed. Educational information con-
veyed in catalog courses and their associated teaching labs (as defined in the EAR) and general science, math, and engineering commonly taught at accredited institutions of higher education (as defined in the ITAR) are excluded from export controls.

§3405.3 **Deemed Exports and Encryption Code**

The transfer of or access to technology controlled under the EAR to a foreign person even while in the United States is “deemed” to be an export. Under the ITAR disclosing controlled technology to a foreign national in the United States is included in the definition of an export and does not have to be treated as a “deemed” export though is often referred to as such. Deemed export controls do not apply to U.S. citizens, permanent residents, and foreign persons with asylum protection living in the United States. However, the controls are applicable to U.S. citizens visiting or working in a foreign country. Deemed export controls do apply to foreign faculty, research assistants and students, and visiting scientists in the United States.

Under the EAR, when a foreign person needs access to controlled information, the criteria for determining whether a license is needed for such “deemed export” is much the same as if a physical export of a piece of controlled equipment were to be exported to that country. (For further discussion of licensing, see §3405.7.) Under EAR, encryption source and object code may be “exported” if posted to a website where it is available for download outside of the U.S.

**Public Domain Information**

Technical information (excluding controlled encryption software) available in the public domain is not subject to export controls and this exclusion is the broadest exclusion available under either regulation (the EAR or ITAR). Software available on public Web sites must be available for download without any restrictions on access to qualify under the public domain definition.

Materials transferred under material transfer agreements that impose publication or other access restrictions must be scrutinized for applicability of controls. When information or technology is protected under a nondisclosure or confidentiality agreement, it is critically important to determine if controls apply and if the protections afforded in the agreement and procedures in place are adequate to ensure compliance.

**Proprietary or Controlled Information**

Many institutions will not accept proprietary information or allow such to be stored on their campus. When controlled information/technology is required for the conduct of a research project, a thorough risk assessment should be conducted. In many instances, sponsors may seek to impose restrictions on the use of foreign nationals unnecessarily and universities that do not believe such restrictions are appropriate given the statement of work, should “push back.” Many institutions have been successful in such negotiations but many have also walked away from projects where the risk outweighs the benefits, especially when students are involved.
Overview of Commerce’s Export Administration Regulations

The ten statutory prohibitions under the Export Administration Regulations (EAR), implemented by the Bureau of Industry and Security (BIS) at the U.S. Department of Commerce, are promulgated in 15 CFR Part 774—The Commerce Control List of the EAR. Violations of any of these prohibitions can lead to the loss of exporting privileges and both civil and criminal penalties. Perhaps of equal concern to universities is the public admonition and bad publicity generated as a result of such noncompliance.

The ten “general prohibitions” articulated in the EAR are:

1. Export or “re-export” of controlled items or technology to a controlled country, inclusive of deemed exports
2. Export of de minimis amounts of U.S. content incorporated into a foreign product (de minimis thresholds are 10 percent for terrorist-supporting countries and 25 percent for all other countries)
3. Re-export of foreign-produced direct product of U.S. technology or software
4. Transfer of items or technology to a denied entity or person
5. Failure to consider the end use/end user
6. Exports to embargoed destinations
7. Support of proliferation activities
8. In-transit shipments (applicable when a shipment will be unloaded “in transit” in a country for which the item being shipped is controlled)
9. Failure to adhere to the terms and conditions of an export license
10. Failure to report known violations including failure to self-report

International Arrangements

The United States belongs to four multilateral regimes that influence the Export Administration Regulations (EAR). The Wassanaar Arrangement (controlling the flow of conventional arms and “dual use” technologies), the Australia Group (addressing chemical weapons, specifically those that can be used in weapons of mass destruction), the Nuclear Suppliers Group, and Missile Technology Control Regime. While the EAR has been updated to bring its controlled items into closer alignment with the Wassanaar controls, the focus remains on items associated with conventional weapons from the Cold War era.

EAR Country Groups

The countries that belong to each regime are illustrated in Supplement No. 1 to 15 CFR Part 740—Country Groups of the EAR. For example, “Group A” countries include Australia, Japan, and Great Britain. An exception may exist in the listed exceptions of an Export Control Classification Number category for countries included in “Group B” — those countries closely aligned to the United States, but who are not members of any of the multilateral regimes, which includes many South and Central American countries. (For a discussion of Export Control Classification Number, see
Countries cited as terrorist-supporting are listed in “Group E.” Countries listed in “Group D” will have a greater number of controls than those in “Group B” but fewer controls than do terrorist-supporting countries.

In a recent Federal Register notice, the Bureau of Industry and Security has indicated the intention to use the presently reserved “Group C” for countries that pose a risk of diversion if approved for export receipt. Future updates will address changes to the country groups. In summary, the country groups serve as a general indication of the level of concern and controls.

**Commerce Control List**

While the primary commercial use or purpose for a commodity or technology may not be military in nature, when there exists a substantial military use application, the item is deemed to be “dual use” (military and commercial) and likely to be controlled under the EAR. The Commerce Control List (CCL) describes items subject to the EAR. (For the CCL, see www.access.gpo.gov/bis/ear/ear_data.html.) The 10 categories of classification under the EAR listed in the CCL begin with category “0.” They are:

- 0 Nuclear materials, facilities, and equipment
- 1 Materials, chemicals, microorganisms, and toxins
- 2 Materials processing
- 3 Electronics design, development, and production
- 4 Computers
- 5 Telecommunications and information security
- 6 Sensors and lasers
- 7 Navigation and avionics
- 8 Marine
- 9 Propulsion systems and space vehicles

**Export Control Classification Number**

Items, technology, and software are identified in the CCL categories and assigned a five-digit Export Control Classification Number (ECCN). The first digit refers to the specific category as listed above (0 through 9). The second digit is a letter and references the product group as follows:

- A – Equipment, assemblies, and components
- B – Test, inspection, and production equipment
- C – Materials
- D – Software
- E – Technology*

At this point, it is important to consider the definitions contained in the EAR. When a word is set in quotations in the EAR, there is an articulated definition in Part 772 of the EAR. For example, “use” and “technology,” among other terms, are specifically defined in the EAR. For a technology defined as “specific information
necessary for the ‘development,’ ‘production,’ or ‘use’ of a product,” to be controlled, there must be a Technology* control specifically listed for the commodity associated with the Technology*. For technology to be controlled for “use,” it must provide information not available publicly that would allow the user to operate, install, maintain, repair, overhaul, and refurbish the commodity. Therefore, the concern for foreign students utilizing and operating controlled equipment in U.S. university laboratories arises primarily when controlled technology that is not available publicly is required. Not all items on the CCL are controlled for “use”; thus, just because an item may be controlled for physical export does not mean that the “technology” allowing for the operation, installation, maintenance, repair, overhaul, and refurbishing as defined is also controlled.

**Reminder**
Definitions in the EAR. When a word is set in “quotation marks” in the EAR, it is defined in Part 772 of the EAR.

The *third* and *fourth* digits of the ECCN refer to the reasons for control and the *fifth* number is used for sequential numbering. An example is provided below.

**Example**
ECCN 2B352 would indicate materials processing (2) test inspection and production equipment (B). The remaining digits represent a particular item. Generally, the smaller the number represented in the last three digits, the greater the number of controls, i.e., 2B001 would be subject to a much larger number of controls than 2B999.

Reasons for controls include classification as
- chemical and biological weapons (CB),
- missile technology (MT)
- national security (NS), and
- regional stability (RS).

Items controlled for antiterrorism (AT) are only controlled for those countries specifically sanctioned as terrorist-supporting countries.

Each ECCN articulates the reasons for control and certain listed exceptions. The Commerce Country Chart found in Supplement No. 1 to 15 CFR Part 738–Commerce Country Chart of the EAR must be utilized to determine which countries are controlled for a specific ECCN. The countries controlled for each ECCN are subject to change and when making a determination on whether a commodity, technology, or software is controlled for a specific country, it is wise to consult the most recent issuance of the CCL found on the Internet.

**Commercial Search Tools**
The process of making determinations as to whether or not a license may be required for a specific activity is somewhat complex and aided by the use of a
commercial search tool. These tools are available by subscription and require a substantial financial investment. However, they do provide an efficient means of conducting this complex search that usually requires technical expertise and legal interpretation. Also commercial search tools should provide links to the most recent regulations including listed exceptions.

**Exceptions**

Exceptions under each ECCN might include listed exceptions. Other exceptions available include the “Temporary” (TMP) exception that can be utilized for shipments to controlled countries of commodities for exhibit or demonstration and for “tools of the trade,” such as research equipment utilized in research fieldwork or laptop computers. Laptop computers are not a primary concern; it is the software and information stored on the laptop that may be controlled and thus must be protected.

When using the temporary exception, it is incumbent that the controlled item remains in the “reasonable” control of the U.S. party responsible for the item. It is not adequate control to leave the item locked in a hotel room or hotel room safe, and researchers utilizing this exception are advised to keep the item with them at all times. When this is not feasible, a license should be sought.

**When to Seek a License**

In summary, when a research project or other activity does not qualify as fundamental research, the institution may need to obtain an export license. The process for determining whether or not an export license should be sought for an export of an item, technology, or software controlled under the EAR to a foreign country or entity or to a foreign person in the United States as a deemed export is to:

1. determine the end-use and end-user;
2. determine the applicable ECCN;
3. identify the reason(s) for control and listed exceptions;
4. review the Country Chart for specific controls;
5. consider whether pertinent exceptions are available; and
6. review the General Prohibitions to determine if a license is required.

*Note:* When a foreign person has dual citizenship, only the most recent citizenship is considered in making licensing determinations under the EAR.

**Example**

*Scenario:* A foreign visiting scientist from China needs access to proprietary technology that is controlled under the EAR for China. There are no applicable exemptions. Publications require prior “review” by the sponsor to ensure no proprietary information including relevant source code or technology is controlled. Does this qualify under the fundamental research exclusion?

*Answer:* A license is required if the foreign person will access technology enabling “use” as defined in the EAR (operation, installation, maintenance, repair, overhaul, and refurbishing) or encrypted source code that is (1) controlled; and (2) protected as proprietary and not available in the public domain. Generally, “use” is characterized by providing the know-how to replicate a piece of equipment.
Overview of State’s International Traffic in Arms Regulations

The International Traffic in Arms Regulations (ITAR), implemented by the Department of Defense Trade Controls (DDTC) under the U.S. Department of State, control items listed on the U.S. Munitions List found in 22 CFR §121.1. (For the U.S. Munitions List, see www.access.gpo.gov/nara/cfr/waisidx_99/22cfr121_99.html.) The ITAR covers both research on defense articles and training or assistance related to the manufacture or production of defense articles.

Most satellite-related technologies are controlled under Category XV of the USML, and under this category technical assistance agreements may be necessary even when defense services provide only information that is available in the public domain and is otherwise exempt from licensing requirements (see 22 CFR §124.1).

Anything having a significant military application can be of concern for the ITAR. The countries comprehensively prohibited for exports under the ITAR are listed in 22 CFR §126.1 of the regulations. Additionally, the Embargo Reference Chart outlines the most up-to-date embargoes subject to ITAR controls. https://www.pmddtc.state.gov/embargoed – countries/index.html.

Technical data as defined in 22 CFR §120.10 of the ITAR focuses on the design, development, and production of defense articles and is controlled.

Fundamental Research and Public Domain Information

Under the ITAR, fundamental research is a subset of the definition of information published or generally available in the “public domain” (see 22 CFR §120.11). While the NSDD 189 definition of fundamental research includes the resulting information that is “ordinarily published and shared broadly in the scientific community” (see discussion above), the ITAR caveat if literally interpreted, can imply that the fundamental research exclusion is not available until the research results are actually published.

Included under the definition of public domain are

◆ information disclosed at conferences and meetings generally open in consideration of a reasonable fee and where attendees may take notes;
◆ information available in libraries open to the public; and
◆ patent information published once the patent has been issued.

Foreign Persons

Foreign persons in the United States who may have access to information controlled under the ITAR must be “bona fide” employees. As defined, a bona fide employee must be a full-time, regular employee of a U.S. institution of higher education with a permanent abode in the United States throughout employment. Foreign persons employed part-time, including students, do not qualify as bona fide employees under the ITAR definition.

Foreign persons from prohibited countries, currently including China, may not have access to ITAR-controlled information without a specific license, and it is the general policy of the Department of State to deny licenses. (Prohibited countries are
listed in 22 CFR §126.1 of the ITAR.)

Foreign persons from other countries must be informed about and agree, in writing, not to transfer controlled technology to another foreign person without a license. For these reasons, the conduct of research that requires access to and use of ITAR controlled information is particularly challenging and incongruent with most university policies.

Reminder
A bona fide employee under the ITAR is a regular, full-time employee of a U.S. institution of higher education with a permanent abode in the United States throughout employment.

3405.6 Overview of Treasury’s Office of Foreign Assets Control

Most transfers of assets or anything of value including cash, payments, and services to countries listed on the Office of Foreign Assets Control (OFAC) list of sanctioned countries may be prohibited. For some countries, such as Cuba, travel to and from the sanctioned country may be prohibited without a license from OFAC, part of the U.S. Department of the Treasury. Sanctions under OFAC are specific to each sanctioned country. (For details, see the “OFAC Sanctions Programs and Country Information” at http://www.treasury.gov/about/organizational-structure/offices/Pages/Office-of-Foreign-Assets-Control.aspx.

Peer Review Exception

While there is an exception for peer review by researchers of manuscripts considered for publication in peer-reviewed professional journals, researchers should be cautioned about providing feedback or other professional guidance to colleagues from sanctioned countries, as such assistance is viewed as having value that would be controlled and require an OFAC license.

Comprehensive sanctions apply to certain countries and prohibit any activity or transaction that would provide something of value. Research and educational activities in a country to which comprehensive sanctions apply require a license and a timely review of the most recently imposed sanctions. Licensing requirements for student study or research projects may be different from the licensing requirements for research or collaborative interactions by faculty researchers.

A list of compliance “case studies” is included as Figure 3405.6-1 below.

Figure 3405.6-1. Case Studies — Application of the Export Control Regulations

A principal investigator contemplates the appointment of a foreign student on an industry-sponsored project involving proprietary information from the industry sponsor that is controlled under the EAR. The sponsored research agreement allows for dissemination of the results pending review, not approval of the publication, by the sponsor to allow for protection of any resulting intellectual property and to ensure that no proprietary information is disclosed in the proposed publication.
Scenario 1: You have determined that the foreign student will not have access to the proprietary information. In this scenario, does the project qualify as fundamental research under the EAR?

Answer: Yes, as provided in NSDD 189, this research would qualify as fundamental research. Prior review by the sponsor for these purposes does not disqualify the institution from the fundamental research exclusion as long as the delay does not exceed a reasonable amount of time, usually 60–90 days. However, a “technology control plan” should be articulated and acknowledged in writing by all parties with access to the proprietary information describing the procedures that will be followed to limit access to the controlled information/technology.

Scenario 2: The foreign student must have access to the proprietary/controlled information, but the technology is not controlled for the student’s country of citizenship. Is any documentation regarding access to the information needed?

Answer: Normal safeguards for the protection of proprietary information should be adequate. However, acknowledgement of those obligations in writing should be incorporated in the award file.

Scenario 3: The information is controlled under the ITAR and the foreign student is from Germany. Does that change the procedures you would follow?

Answer: The bona fide employee exception under the ITAR does not apply to students including graduate research assistants working a full .50 FTE, and a license would be required for the student to have access to the controlled technology. This applies to graduate and undergraduate students.

Scenario 4: The information is controlled under the ITAR and the co-PI is a faculty member who is a citizen of China. Does the bona fide employee exception apply?

Answer: The bona fide employee exception does not apply to citizens from prohibited countries and China is a prohibited country under the general prohibitions in 22 CFR §126.1. A license would be required, but there is a policy of denying licenses to a prohibited country.

Scenario 5: A co-PI from China has applied for permanent residency, and her application is pending. Would this make any difference as to whether or not the bona fide employee exception applies?

Answer: Though unwritten, a license would still be required, but the fact that the co-PI is pursuing permanent residency would be taken into consideration by the Directorate of Defense Trade Controls in making a licensing determination. The Bureau of Industry and Security would offer the same consideration.

Scenario 1: You have determined that the foreign student will not have access to the proprietary information. In this scenario, does the project qualify as fundamental research under the EAR?

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### 3405.7 Licensing Issues

The conduct of sponsored research often triggers licensing requirements. Licensing procedures for each federal agency implementing export controls differ. Further, licenses under multiple regulations might be required in instances where research being conducted in a sanctioned country requires travel under an OFAC license and the physical export of equipment or services may require a license under either the EAR or ITAR.

**SNAP-R System and the EAR**

Paper copies of license applications and “commodity classifications” (see below) are no longer accepted, instead use of the Web-based Simplified Network Application Process Redesign (SNAP-R) system is required for licensing under the EAR. When submitting applications through the SNAP system, one must adhere to strict limitations on the number of characters that can be entered into individual fields.

It is generally advisable to include with the SNAP-R submission a letter of explanation, “white paper,” drawings, technical description, or other explanatory information to assist the licensing officer. The supplemental materials must be saved in PDF format and uploaded in the SNAP system. If supplemental materials are required for either paper or electronic applications, each item/page must be submitted in hard copy form and should be clearly marked with the “Application Control Number.” For deemed export licensing, proof of the intention of the foreign person to permanently reside in the United States will be taken into consideration when the licensing decision is made.

**‘Commodity Classification’ and ‘Commodity Jurisdiction’ Determinations**

The EAR and ITAR are discrete sets of regulations, however, ambiguity may exist as
to whether an item or technology is controlled under the CCL (EAR) or the USML (ITAR). The State Department has primary and superior jurisdiction to the Commerce Department. Ideally, there should be no overlap but it may be unclear as to any particular item or technology which agency has jurisdiction. When it is known or believed that an item or technology is subject to the EAR but the ECCN cannot be determined with certainty a request for a “Commodity Classification” may be submitted to the Commerce Department via the SNAP-R system. or When a question exists whether an item or technology is controlled under the EAR or ITAR a determination of controlling jurisdiction is required and may be obtained by submitting a “Commodity Jurisdiction Determination request” to the State Department. Only the State Department can make a jurisdiction determination thus a Commodity Classification is not a binding jurisdiction determination and is only binding on the Commerce Department as to the Commodity Classification (i.e., the ECCN). The procedures for requesting a Commodity Classification are outlined in 15 CFR Part 748 of the EAR and for seeking a Commodity Jurisdiction in 22 CFR §120.4 of the ITAR.

**Licenses Under ITAR**

Licensing for either physical export or release of technical data or technology to a foreign national in the United States under the ITAR requires registration and payment of a fee as outlined in 22 CFR §122.3 of the ITAR. An “empowered official” must be designated and, at most universities, this is usually the chief research officer or his/her designee. A “technical assistance agreement” (TAA) should be sought for the provision of defense-related services. Physical exports of items controlled under the ITAR require other agreements, as outlined in the regulations.

**Licenses Under OFAC**

Requests for licenses under OFAC require a letter describing the purpose of the travel or transaction in detail as described in “Licensing Questions” found at http://www.treasury.gov/resource-center/faqs/Sanctions/Pages/ques_index.aspx#license. The export of equipment associated with an OFAC license may require a separate license under the EAR or ITAR. Because licenses must be renewed annually and can take, on average, 60 to 90 days to acquire, institutions are advised to request the license for a full year.

Figure 3405.7-1 outlines the validity period for licenses obtained under each regulation. Reviewing agencies have 30 days to initiate action and comment on the application but agency processing of a license application may take months. Licenses most often include provisos, limitations, and caveats that require compliance, and such compliance may make the license unworkable. For example, deployment of controlled equipment for fieldwork in a controlled country may require 24/7 security by U.S. citizens, making adherence infeasible and/or cost prohibitive.
Figure 3405.7-1. Export Licenses

<table>
<thead>
<tr>
<th>Regulation</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>EAR</td>
<td>2 years</td>
</tr>
<tr>
<td>ITAR</td>
<td>4 years</td>
</tr>
<tr>
<td>OFAC</td>
<td>1 year</td>
</tr>
</tbody>
</table>

Reminder
Under ITAR, an empowered official must be designated, often this is the chief research officer or his or her designee.

§3405.8 Role of Technology Control Plans
A “technology control plan” (TCP) describes the safeguards for protecting export-controlled technology and is a required element for licensing applications for the transfer of controlled technologies. Additionally, a TCP is an important element of compliance documentation.

Each technology control plan should outline the procedures employed in protecting access to controlled items and technology and represents the commitment of all involved parties to compliance. A physical security plan that utilizes badging and other access controls may be required as part of the TCP. For data stored electronically, an information security plan specifies how access to controlled information/technology will be assured.

A technology control plan begins with an institutional commitment to compliance in the form of policies and procedures. A technology control plan is specific to a particular project, not a general compliance program. The plan must be articulated in written form and signed by all parties involved. A sample template for certification appropriate for these purposes can be found at www.utexas.edu/research/osp/ (search under “Forms”).

§3405.9 Recommended Practices for Compliance
The bedrock underpinning any effective compliance program, including one addressing export controls, requires first and foremost a commitment from the institution’s highest levels in the form of (1) a policy statement that is widely disseminated and (2) the allocation of adequate resources. Identification of a responsible official, clearly articulated procedures, awareness training, and ongoing oversight all contribute to effective compliance and document due diligence. For institutions required to register under the ITAR, an empowered official must be named. (See discussion of “empowered official” above.)

Importance of Educating Constituents
Awareness training is an essential component of any export management system and because export controls can apply to activities outside of the research realm — such as foreign travel — should be provided widely. Faculty, staff, and students in
both academic and administrative units and executive officers should be briefed in order to have a basic understanding of the types of issues and transactions that may be controlled under export controls, embargoes, and sanctions. Individuals also need to readily know whom to contact for ongoing information and assistance.

Institutions committed to effective compliance programs must identify a responsible official and, thus, the office primarily responsible for export controls compliance. While some institutions have placed that organizational responsibility in research offices, others have separate compliance units that fulfill that role. Even if a research administration office does not have full responsibility for the compliance program, because of the unique role and perspective of the research administration unit(s), effective compliance programs rely heavily on the unit(s).

Most licensing requirements arise for an institution of higher education from research, which is often sponsored research.

**Record Keeping**

Record-keeping requirements under the EAR, ITAR, and OFAC basically require a five-year commitment. However, the enacting event for each is slightly different. The five-year requirement begins:

- For EAR: on the date of the last export/re-export transaction (see 15 CFR §762.6)
- For ITAR: on the expiration of the ITAR license
- For OFAC: on the date of the OFAC transaction

Electronic archival is permitted under the EAR (see 15 CFR §721.1(d)(2)) and the ITAR (see 22 CFR §122.5). Even in those cases where no license is required, retention of the documentation relating to the review process, technology control plan, and other compliance activities also should be retained. Because the regulations and countries of concern are subject to change, a central database that tracks the specific foreign concerns or categories can assist an institution with respect to ongoing and updated compliance activities.

Invocation of certain exemptions under the ITAR carry specific record-keeping and reporting requirements. Once licenses or technical assistance agreements are no longer required, it is advisable to terminate the agreement or license to minimize the period of record retention.

Periodic assessment and review of the institution’s research activities and of the efforts to ensure proper practice and adherence to procedures is a hallmark of any effective compliance program. The federal government is beginning to assess university compliance programs and undertake random document reviews of projects that have the potential for export controls, such as projects sponsored by defense agencies, those involving foreign fieldwork or other research activities, and those projects that employ foreign persons from regulated countries.

**Reporting Violations**

In spite of the most rigorous compliance program, a violation may occur. If a faculty
member or other university employee suspects a violation has or might occur he or she must know whom to contact for guidance, and the appropriate action must be taken. While the empowered or responsible official bears the responsibility and authority for making the ultimate decision on whether or not a reportable violation has occurred and requires disclosure, that decision should not be made without consultation with legal counsel and appropriate executive officers. The EAR, ITAR, and OFAC guidelines explicitly offer that voluntary self-reporting of violations will be taken into consideration when assessing penalties and fines, and it may mitigate the decision on penalties.

**Reminder**

Penalties under the EAR, ITAR, and OFAC can be severe and include criminal and civil monetary penalties.

Institutions with robust compliance systems that include education programs will fare better in general. Individuals involved with any infractions related to export controls are individually accountable.

### Conclusion

Export controls are the law of the land and will continue to be scrutinized by federal agencies and officials including members of Congress.¹ Violations of the regulations can lead to significant civil and criminal penalties. Academia continues to push back when attempts are made to further tighten controls that would impede fundamental research on U.S. college and university campuses. Figure 3405.10-1 provides a list of Web resources to help an institution stay updated.

**Figure 3405.10-1. Web Resources**

**Federal Agency Sites**

**U.S. Department of Commerce**

- Bureau of Industry and Security: www.bis.doc.gov/index.htm
- Export Administration Regulations (EAR): www.access.gpo.gov/bis/ear/ear_data.html
- Commerce Control List: www.access.gpo.gov/bis/ear/ear_data.html

¹ For example, a December 2006 Government Accountability Office (GAO) report, “Export Controls: Agencies Should Assess Vulnerabilities and Improve Guidance for Protecting Export-Controlled Information at Universities” (GAO-07-70) seems to commend higher education efforts to comply with confusing and sometimes conflicting rules. However, the report also recommends that the State Department and Commerce Department conduct “threat assessments” to see whether universities are truly vulnerable to violations of the rules. Link to the report: www.gao.gov/new.items/d0770.pdf.

U.S. Department of State
Directorate of Defense Trade Controls: www.pmddtc.state.gov
International Traffic in Arms Regulations (ITAR): www.pmddtc.state.gov/regulations_laws/itar.html
U.S. Munitions List: www.ecfr.gov/cgi-bin/text-idx?SID=86008bdf71f827967fd41a180750a&node=22:1.0.1.13.58&rgn=div5

U.S. Department of the Treasury
Office of Foreign Assets Control: www.treas.gov/offices/enforcement/ofac
Licensing Questions: www.treasury.gov/resource-center/faqs/Sanctions/Pages/answer.aspx#60
Specially Designated Nationals List: www.treasury.gov/offices/enforcement/ofac/sdn
This section includes expanded coverage of topics related to export controls.

Export Control Reform and Higher Education
Kelly Hochstetler, University of Virginia

The current laws and regulations controlling technology exports have their foundation in the cold war era and are out of step with the current global nature of commerce and science. Recognizing this disconnect President Obama initiated an interagency review of the US export control system in August 2009. The intent of the interagency review was to identify ways to strengthen national security, increase the competitiveness of the US industrial base, and adapt the US export control system to today’s economic and technological landscape. The White House issued a press release (http://www.whitehouse.gov/the-press-office/2010/08/30/president-obama-lays-foundation-a-new-export-control-system-strengthen-n) summarizing the findings of the interagency review in August 2010 and these findings form the framework for the administration’s ongoing export control reform initiative which includes four major areas of focus:

◆ Update and restructure the current export control lists, with the ultimate goal of creating a single control list, to make it easier for exporters to determine the jurisdiction and control status of their items.

◆ Create a clear and consistent licensing policy and building a single licensing agency.

◆ Move to a single modernized information technology system to handle the intake, routing and review of export applications by all involved agencies.

◆ Create a single agency to coordinate and deconflict export control enforcement activities.

The International Traffic in Arms Regulations (ITAR) (22 CFR 120-130) administered by the Directorate of Defense Trade Controls (DDTC), the Export Administration Regulation (EAR) (15 CFR 730-774) administered and enforced by the Bureau of Industry and Security (BIS), and the trade sanction regulations (31 CFR 500-599) administered and enforced by the Office of Foreign Assets Control (OFAC) are the principle export control regulations of the United States (U.S.). Additional regulations governing various types of international trade fall under the jurisdiction of other U.S. Government agencies (e.g. nuclear materials and technologies, endangered species, and drugs and pharmaceuticals under the jurisdiction of the Nuclear Regulatory Commission and Department of Energy, Department of the Interior, and the Food & Drug Administration, respectively).

Although the primary focus of the ongoing export control reform initiative has been on revision and modernization of the ITAR and EAR, other actions take as part of the reform initiative have had broader applicability, including the creation of the Export Enforcement Coordination Center (E2C2) by Executive Order 13558
on November 9, 2010. The purpose of the E2C2 is to coordinate and enhance the efforts of the enforcement agencies “to detect, prevent, disrupt, investigate, and prosecute violations of U.S. export control laws” by sharing “intelligence and law enforcement information related to these efforts to the maximum extent possible, consistent with national security and applicable law.” The modernization of the IT infrastructure supporting export license submission and interagency review is underway, but those changes will continue to be largely invisible to the regulated community. DDTC, BIS and OFAC are also developing a single export application form which is expected to be released for public comment in late 2013 or early 2014. Initially the D-Trade2 and SNAP-R electronic submission systems for DDTC and BIS, respectively, will be maintained; however, these will become portals to a single U.S. Government export control IT system that will be accessible by everyone with review authority.

The regulated community has generally welcomed and supported all aspects of the export control reform initiative. Support has been particularly strong for the administration’s attempts to creating a “bright line” between technologies (e.g. items, software and proprietary technical information) subject to control under the ITAR and those controlled under the EAR; the establishment of positive criteria to describe technologies identified on the control lists; and the transfer of less critical technologies from the U.S. Munitions List (USML) (ITAR § 121.1) to the Commerce Control List (CCL) (EAR § 774). While many of the changes will provide greater clarity and certainty for university researchers and administrators other aspects of the export control reform initiative, particularly with regard to emerging and developmental technologies, are likely to result in an increase in the frequency with which university research programs and the technologies they produce being subject to control under the ITAR.

The DDTC and BIS have been and will continue to work closely to coordinate release of Federal Register notices relating to the revision to the control lists to ensure that there is no lapse in regulatory coverage for technologies moving from the ITAR to the EAR. The first pair of final rules implementing export control reform was issued on April 16, 2013, (Federal Register Vol. 78, No. 73, pp. 22740-22759) with the changes to take effect on October 15, 2013. The revisions to CCL are largely clarifications and the addition of new Export Control Classification Numbers (ECCN) to accommodate those technologies moving from the ITAR to the EAR. In contrast, the USML is being restructured into a positive list similar to the CCL; this adds clarity for exporters and will make it possible to merge the two lists into a single consolidated list of export controlled technologies should congress act on this recommendation of the administration. The proposed and final rule changes on or after April 16, 2013, provide a clear indication of the future structure of the USML and allow us to begin to assess the impact the reform of the control lists is likely to have on institutions of higher education.

Beginning with the first final rule implementing export control reform (Federal Register Vol. 78, No. 73, pp. 22740-22759), DDTC has begun to explicitly claim that developmental technologies funded by the DoD are subject to the ITAR. This language is first found in paragraph (f) of Category VIII Aircraft and Related Ar-
articles are subject to the ITAR which reads “[D]evelopmental aircraft and specially
designed parts, components, accessories, and attachments therefor funded by the
Department of Defense.”

A note to the paragraph identifies two mechanisms by which a developmental
technology may be excluded from control by the paragraph. The first is if the tech-
nology has been determined to be subject to the EAR via a commodity jurisdiction
determination. While this option may be reasonable for defense companies who
routinely deal with the development and manufacture of defense articles to meet
specific technical requirements or performance criteria; it is not generally feasible
for institutions of higher education who are typically developing new technolo-
gies based on broad general objectives through the use of best efforts and where
the specific technology may be developed to address a fundamental research ques-
tion rather to fulfill a specific deliverable required by the terms of the DoD funding
award. The level of technical specificity required for a commodity jurisdiction is
simply not typically available prior to the start of the research when decisions must
be made about the inclusion or exclusion of foreign nationals.

The second way that a technology may be excluded from control under para-
graph VIII(f) is if it is identified in the relevant DoD contract as being developed for
both civil and military applications. This mechanism is potentially useful for institu-
tions of higher education because it can be accomplished prior to the initiation of
the research project. The concern, however, is that DoD contracting officers are often
not technically qualified to make such determinations and are therefore likely to
reject requests for inclusion of the required language in university contracts. While
institutions of higher education may interpret the use of the term “contract” to ex-
clude applicability to other types of DoD funding awards, e.g. grants and coopera-
tive agreements, this restrictive interpretation is not required. Given that “contract”
is not defined in the ITAR the common language definition of “a binding agreement
between two or more persons or parties” (Merriam-Webster.com) should be used;
based on this definition, the term “contract” would include grants and cooperative
agreements. This has been further clarified by DDTC in later proposed and final
rules where the language of the note has been changed to read “identified in the
relevant Department of Defense contract or other funding authorization as being
developed for both civil and military applications.” However, this applicability to
grants creates an additional issues as the terms of grants are not typically subject
to negotiation and do not require a formal (signed) acceptance of the terms by the
recipient.

The July 8, 2013, final rule (Federal Register (FR) Vol. 78, No. 130, pp. 40922-
40933) issued by DDTC included in similar controls on DoD funded developmental
vessels and specially designed parts, components, accessories, and attachments
(Category VI(c)). This final rule also specifically added controls on developmental
armor in Category XIII(e)(7) and developmental [submersible] vessels in Category
45018-45025) issued by DDTC includes controls on DoD funded developmental
electronic equipment or systems in Category XI(a)(7); there is no reason to believe that
this language will be removed in the final rule. Similar controls on developmental technologies are anticipated in other USML categories, but were not identified in the final rules for Category VII Ground Vehicles; Category XVII Classified Articles, Technical Data, and Defense Services Not Otherwise Enumerated; Category XIX Gas Turbine Engines and Associated Equipment; and Category XXI Articles, Technical Data, and Defense Services Not Otherwise Enumerated. No controls on developmental technologies are identified in the May 24, 2013, proposed rule (Federal Register Vol. 78, No. 101, pp. 31444-31451) issued by DDTC for Category XV Spacecraft Systems and Related Articles but they may change in the eventual final rule. Control of developmental technologies is expected in most if not all of the coming final rules revising USML categories.

As if the staggered release and implementation of the final rules implementing changes to the USML categories was not challenging enough for universities, the July 8, 2013, final rule (Federal Register (FR) Vol. 78, No. 130, pp. 40922-40933) issued by DDTC included an additional note to the paragraphs controlling DoD funded developmental technologies. This note specifies that the first note, which identifies the ways in which technologies may be excluded from control under the paragraph, “is applicable to those contracts and funding authorizations that are dated one year or later following the publication of the rule.” This note was not included in the first final rule implementing export control reform (Federal Register Vol. 78, No. 73, pp. 22740-22759) but DDTC has indicated (personal communication) that conforming changes will be made to Category VII(f) prior to the effective date of the final rule (October 15, 2013); however, those changes had not been issued at the time of this writing.

One positive proposed change to control lists is the move of commercial satellite technology from the ITAR to the EAR. This transfer was made possible by the December 21, 2012, passage of the National Defense Authorization Act for Fiscal Year 2013 which included language overturning the requirements of Section 1513 of the Strom Thurmond National Defense Authorization Act of 1999 which mandated that satellites and related items be included on the USML. This action returned full authority to the President to designate those technologies and services subject to control under the ITAR.

Although the majority of the impacts to higher education from changes to the control lists are likely to come from new additions and clarifications to the USML categories, there are also CCL changes worth noting. In particular, BIS is adding two new series of ECCNs to accommodate technologies that are moving from the USML to the CCL. The first of these is the 600 series that is will be used to receive military commodities while the second, the 500 series, will be used for commercial satellite or space technologies. The most significant difference between the new ECCN series is that the prohibition on exports to destinations subject to a U.S. arms embargo (i.e. those countries listed in ITAR § 126.1) will be maintained once the commodities are moved to the CCL.

"Technology" is defined term in the EAR (EAR § 772) and refers to information related to the "development," "production," or "use," of a controlled commodity.
“Use” is also a defined term in the EAR and refers to information on the installation, modification, operation, repair, maintenance and refurbishment of a commodity; BIS has always interpreted that all six elements must be present for the “technology” to be subject to control. Due to the nature of the technologies being transferred to the CCL, BIS will, as deemed necessary, be controlling the components of “use” independently for the 600 series. Control of “use” “technology” for 500 series commodities will be consistent with its use in current ECCNs because these technologies are commercial rather than military.

The export reform initiative is ongoing and final rules have not yet been released for many USML categories. In addition to changes to the control lists, DDTC and to a lesser extent BIS are considering changes to the definitions of certain key terms used in the ITAR and EAR, respectively. New definitions for key terms may greatly impact how changes to the control lists and other parts of the export control regulations may affect university research and the training of the next generation of scientists and engineers; until they are released it is impossible to guess what their impact will ultimately be.

In the meantime, institutions of higher education must deal with the impact of the final rules that have been issued. Those changes will be felt most strongly in DoD-funded research programs in emerging technology areas such as applied engineering and computer science. Researcher administrators will need to carefully review all types of DoD-funded awards (e.g. grants, contracts and cooperative agreements) to determine whether or not the award is likely to result in technology advances and to ensure that appropriate terms are provided when those advances are intended to have both civil and military applications; this applies to situations in which the institution of higher learning is the prime recipient or a subcontract recipient on an industry prime contract. Determining whether or not the developmental items are subject to control under the ITAR is only the first step; once ITAR jurisdiction has been established institutions will have to determine whether or not foreign nationals may participate, whether or not the results may be published without formal approval from DDTC, and ultimately whether or not to accept this type of restricted research activity.

As the export reform initiative progresses it is critical that institutions of higher education monitor proposed changes, make the agencies aware of the potential impact changes may have on academia, and continue to adapt internal export control compliance policies and programs to implement changes as final rules are issued.

About the Author

Kelly Hochstetler is the Director of the Office of Export Controls at the University of Virginia. Upon accepting this newly created position in 2010, Kelly was charged with developing and implementing an institutional export compliance program for the university. Kelly continues to serve as the primary institutional official responsible for the day-to-day management of the university’s export controlled activities. Her duties include institutional export control risk assessment; performing reviews of proposals, award documents, non-disclosure documents, and other sponsorship
or partnering agreements to identify potential export issues; providing training and guidance to university researchers and support staff; and preparing license applications and other correspondence to regulatory agencies. These activities require close coordination with various university executive, administrative, academic and research academic offices, as well as outside counsel. Kelly received her doctorate in biological sciences from the University of Alaska Fairbanks.
\textbf{13430} \hspace{1em} \textbf{Practical Tools}

This section includes practical tools — flowcharts, checklists, etc. — relating to managing compliance with export controls. These materials are culled from a variety of authoritative sources.

\textbf{13430.1} \hspace{1em} \textbf{Outline of a Export Compliance Program}

AIS editors

The following outline or checklist is based on a presentation that discussed export compliance involving the International Traffic in Arms Regulations (ITAR), implemented by the Department of Defense Trade Controls (DDTC) at the U.S. Department of State (see §3405.5). The outline, however, also may be of general help to research administrators in reviewing their institution’s overall export compliance program.

\textbf{Compliance Program}\textsuperscript{1}

\textit{Why do you need a compliance program?}

\begin{itemize}
  \item The export control regulations are comprehensive and detailed.
  \item Penalties for violations are significant and include serious monetary and nonmonetary penalties.
  \item The regulatory system reflects the importance of defense trade to U.S. national security and foreign policy interests. Good universities, institutions, and laboratories must protect themselves and our country’s interests with strong internal controls.
  \item There are sophisticated procurement networks trying to fool you and the government to get this technology.
\end{itemize}

\textit{In developing the program, remember …}

\begin{itemize}
  \item There is no “magic formula.”
  \item One size does not fit all.
  \item A sound program starts with written direction issued by senior management.
  \item An effective program continues with ongoing senior management support, oversight, and training.
\end{itemize}

\textit{A compliance program should …}

\begin{itemize}
  \item Establish responsibilities and procedures
  \item Inform employees
  \item Establish comprehensive records
  \item Provide for timely reporting
\end{itemize}

\textsuperscript{1} This outline/checklist is based on a presentation by David Trimble, Director, Defense Trade Controls Compliance, May 2007, at the “Symposium on Export Controls.” The presentation is available on the Federal Demonstration Partnership Web site at www.thefdp.org/exp_controls_presentations.html.
Be proactive, not reactive
Conduct training regularly
Report violations promptly
Have senior-level management support — a must

Be sure your program allows you to …
Screen for proscribed countries/ineligible parties
Review for restrictions in contracts/subcontracts
Monitor publications that may rely on or include restricted data
Review staffing and participation of foreign person employees and students
Monitor international and local visitors to discuss projects that may contain or disclose restricted technical data
Validate exemption or license criteria satisfied
Review hardware and technical data (including instruments) needed to be used in order to obtain desired fundamental research results
Maintain physical and IT security
Monitor “defense services” to remain within scope of license or exemption

Final thoughts …
Again, be proactive, not reactive.
Maximize training opportunities.
Don’t hesitate to seek government guidance.
13430.2  Deemed Exports and the EAR

AIS editors

Transferring or providing access to technology controlled under the Export Administration Regulations (EAR) to a foreign person even while in the United States is “deemed” to be an export (to the foreign national’s country of origin) (see ¶3405.3). The EAR are implemented by the Department of Commerce’s Bureau of Industry and Security (BIS). To comply with the deemed export requirement, it is important that research administrators understand exactly who is a foreign national. A review of the definition follows.

Under the EAR, when a foreign person needs access to controlled information, the criteria for determining whether a license is needed for such “deemed export” is much the same as if a physical export of a piece of controlled equipment would be exported to that person’s country of origin. (For a discussion of export licensing, see ¶3405.7.)

According to BIS,¹ any foreign national is subject to the “deemed export” rule except a foreign national who

1. is granted permanent residence, as demonstrated by the issuance of a permanent resident visa (i.e., “Green Card”); or

2. is granted U.S. citizenship; or

3. is granted status as a “protected person” under 8 U.S.C. 1324b(a)(3).

It is BIS policy to recognize an individual’s most recent country of citizenship or permanent residency as his or her home country for licensing purposes and BIS offers the following examples:

◆ In the case of dual citizenship: If an individual is a citizen of China, but most recently became a Canadian citizen, then under the BIS deemed export licensing policy, BIS would recognize this individual as a Canadian for licensing purposes. In this example, export control licensing requirements for Canada would apply to this individual.

◆ When citizenship and permanent residency differ: If an individual is a citizen of India, but has obtained permanent residency in the United Kingdom (U.K.), then this individual would be recognized as a U.K. permanent resident for licensing purposes. In this example, that means that this individual would be required to obtain a license only for technology which is export controlled to the United Kingdom.

If this same Indian foreign national traveled to visit facilities in a third country, say Germany, the Indian national’s U.K. permanent residency status still drives the licensing requirements and releases of technology to him or her would be considered as transfers to the United Kingdom.

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¹ This information is excerpted from material available at www.bis.doc.gov/deemedexports/deemedexportsfaqs.html and www.bis.doc.gov/DeemedExports/DeemedExportsSupplementQA.html.
Even if that same Indian foreign national comes to the United States, as long as the Indian foreign national maintains his or her permanent residency status in the United Kingdom, transfers of technology to that individual would be deemed as transfers to the United Kingdom.

◆ **When citizenship or residency cannot be determined:** If an institution is uncertain which country of origin should be used for deemed export license purposes, the exporter should contact BIS for further guidance and resolution (see below).

Institutions are reminded that although the deemed export rule may be “triggered” by the presence of a foreign national, this does not necessarily mean that an export license is required. Also to be considered is whether the technology is controlled under the EAR (see ¶3405.4).

**Resources**

Research administrators are reminded that the BIS Web site includes a variety of regulatory information, including the EAR regulations, the Commerce Control List, etc. (see Figure 4, page 3405:16), as well as an assortment of FAQs and export guides.

BIS provides two additional methods of assisting research administrators understand the basics of export controls:

◆ **Seminars:** Attendance at an export controls seminar may be a good place to start to learn about export licensing requirements and the Export Administration Regulations (EAR). A list of seminars is posted on the BIS Web site at www.bis.doc.gov/SeminarsAndTraining/webinars.htm, and you can register to

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**Worth Noting**

“This today’s guilty verdict should serve as a warning to anyone who knowingly discloses restricted U.S. military data to foreign nationals,” said Patrick Rowan, Acting Assistant Attorney General for National Security. This statement appeared in a press release issued by the Justice Department after a federal jury convicted a professor emeritus of the University of Tennessee of conspiring with a Knoxville, Tenn., technology company to unlawfully export fifteen different “defense articles” to a citizen of the People’s Republic of China in violation of the Arms Export Control Act. This law prohibits the export of defense-related materials, including technical data, to a foreign national or a foreign nation. The illegal exports related to technical data and information developed through a U.S. Air Force research and development contract. Link: http://knoxville.fbi.gov/dojpressrel/2008/kxillegalexports090308.htm.

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**Reminder**

If it is determined that a license is required because the technology does not qualify for treatment under EAR99 (EAR99 technology generally does not require a license) and no license exception is available, you must apply for an export license under the “deemed export” rule when both of the following conditions are met: (1) you intend to transfer controlled technologies to foreign nationals in the United States; and (2) transfer of the same technology to the foreign national’s home country would require an export license.
receive email notifications of upcoming seminars (at www.bis.doc.gov/Forms/NotificationForm.htm).

◆ Counseling: BIS export counselors can be contacted by phone at (202) 482-4811 (Washington, DC) or (408) 291-4212 (Northern California) or (949) 660-0144 (Southern California); e-mail them in Washington (www.bis.doc.gov/Forms/AskaCounselor.html) or California (www.bis.doc.gov/Forms/biswestinquiry.html).

Deemed Export Advisory Committee

The Deemed Export Advisory Committee (DEAC) is a federal advisory committee established in 2006 to conduct a comprehensive, “top-down” review of deemed export policy and deliver a set of recommendations. The DEAC consisted of 12 business and academic leaders. The DEAC held quarterly open meetings in 2007 and solicited input from stakeholders.

Final Report. The DEAC released its final report in late December 2007 (http://tac.bis.doc.gov/2007/deacreport.pdf). In it, the committee recommends an overhaul in the U.S. approach to deemed export controls. The transmittal letter accompanying the report states:

It is the Committee’s principal conclusion that the existing Deemed Export Regulatory Regime no longer effectively serves its intended purpose and should be replaced with an approach that better reflects the realities of today’s national security needs and global economy. The obsolescence of the current regime has been brought about by profound developments in science and technology, the free-flow of massive amounts of information, the mobility of the world’s populace, the burgeoning economies of other nations, and the change in the character of threats to America’s security.

Contained herein is a proposed approach to the management of Deemed Exports that the Committee believes is better suited to America’s needs in the Twenty-First Century.

BIS Proposed Rulemaking. It is too soon to know whether the DEAC report will bring any real changes in export control policy. However, the Bureau of Industry and Security (BIS) has recently closed an extended period for public comments on two Deemed Export Advisory Committee recommendations. BIS published a notice in the May 19 Federal Register seeking input on (1) whether the scope of technologies on the Commerce Control List subject to deemed export licensing requirements should be narrowed, and if so, which technologies should be subject to the requirements, and (2) whether a more comprehensive set of criteria should be used to assess country affiliation for foreign nationals with respect to deemed exports.

BIS Listserv

The BIS has an “Email Notification Service” that provides updates about regulatory changes and export training seminars. Link to sign up: www.bis.doc.gov/forms/emailnotification.htm.
Guidelines for a Compliance Program

The Directorate of Defense Trade Controls has developed a set of guidelines to assist organizations create and implement internal export control compliance programs for DDTC-regulated requirements (under the Arms Export Control Act and the International Traffic in Arms Regulations). Although technically written for commercial organizations, the guidelines may be of help to a research administrator in reviewing or developing an export compliance program for its college or university. They are included at Figure 3430.3-1.

Figure 3430.3-1 Compliance Program Guidelines

Comprehensive operational compliance programs include manuals that articulate the processes to be followed in implementing the company [Institutional] program. Important elements of effective manuals and programs include:

Organization Structure
◆ Organizational charts.
◆ Description (and flow charts, if appropriate) of company’s defense trade functions.
◆ Description of any management and control structures for implementing and tracking compliance with U.S. export controls (including names, titles, and principal responsibilities of key officers).

Corporate [Institutional] Commitment and Policy
◆ Directive by senior company management to comply with Arms Export Control Act (AECA) and the International Traffic in Arms Regulations (ITAR).
◆ Knowledge and understanding of when and how the AECA and ITAR affect the company with ITAR controlled items/technical data.
◆ Knowledge of corporate [institutional] internal controls that have been established and implemented to ensure compliance with the AECA and ITAR.

Examples of detail:
◆ Citation of basic authorities (AECA, ITAR).

Figure 3430.3-1, continued

- Identification of authorized U.S. Government control body (Directorate of Defense Trade Controls or DDTC).
- Corporate [institutional] policy to comply fully with all applicable U.S. export control laws and regulations.
- Compliance as a matter for top management attention that needs adequate resources.
- Identification, duties, and authority of key persons (senior executives, empowered officials) for day-to-day export/import operations and compliance oversight.
- Corporate [institutional] export administration organization chart.
- Operating division export administration flow chart.

Identification, Receipt and Tracking of ITAR Controlled Items/Technical Data

Methodology used, specifically tailored to corporate [institutional] structure, organization, and functions, to identify and account for ITAR controlled items/technical data the company handles (trace processing steps of ITAR controlled transactions from the time the company manufactures/receives the item to the time an item is shipped from the company – or in the case of a defense service, when provided).

Examples of questions to be addressed:

- Are appropriate employees familiar with the AECA and ITAR and related requirements, including handling export approvals with certain provisos and limitations?
- Are company [institutional] employees notified of changes in U.S. export control restrictions, and are they provided accurate, reliable interpretation of U.S. export control restrictions?
- What U.S. origin defense articles are manufactured/received by the firm and from whom? How identified and “tagged”?
- What U.S. origin technical data related to defense articles are produced/received by the firm and from whom? How identified and “tagged”?
- What items are manufactured by the firm using U.S. origin technical data? How identified and “tagged”?
- What items or articles are manufactured by the firm that incorporates U.S. origin defense articles (components)? How identified and “tagged”?
- What kind of recordkeeping system does the company maintain that would allow for control of, and for retrieval of information on, U.S. origin technical data and/or defense articles exported to the company?

Re-Exports/Retransfers

Procedures utilized to (a) obtain written State Department approval prior to the retransfer to a party not included in a State Department authorization of an item/technical data transferred or exported originally to the company, and (b) track the re-export or re-transfer (including placing parties on notice that the proposed transfers involve US origin products and labeling such products appropriately).

continued
Figure 3430.3-1, continued

- Procedure when an ITAR controlled item/technical data is transferred by the company to a foreign national employed at the company.
- Procedure when an ITAR controlled item/technical data is transferred by the company to a foreign person within the U.S.
- Procedure when ITAR controlled technical data or defense articles are transferred from the company to a foreign person outside of the U.S.
- Procedure when an ITAR controlled item/technical data is to be used or transferred for an end-use not included in the State Department authorization.

Restricted/Prohibited Exports and Transfers

- Procedure for screening customers, carriers, and countries.
- Screening procedure for high-risk transactions to combat illegal exports/retransfers.
- Procedures to investigate any evidence of diversion or unauthorized use of U.S. origin products.

Recordkeeping

- Description of record systems concerning U.S. origin products.
- Procedures for maintaining records relating to U.S. origin products for five years from the expiration of the State Department license or other approval.
- Regular internal review of files to ensure proper practices and procedures by persons reporting to top management.
- Perform audits periodically to ensure integrity of compliance program.
- Emphasis on validation of full export compliance, including adherence to license and other approval conditions.
- Measurement of effectiveness of day-to-day operations.
- Adopt procedure for highlighting any compliance areas that needs more attention.
- Report known or suspected violations to corporate [institutional] export administration office.
- Effective liaison and coordination with ombudsman.

Examples of detail:

- Specific description of procedures (examination of organizational structure, reporting relationships, and individuals assigned to export/import controls process.
- Random document review and tracing of processes.
- Review of internal recordkeeping, communications, document transfer, maintenance and retention.
- Conclusion and report of violations to corporate [institutional] export administrator.
- Coordination with ombudsman.

continued
Figure 3430.3-1, continued

Training
◆ Explanation of company training program on U. S. export control laws and regulations.
◆ Process to ensure education, training, and provision of guidance to all employees involved on exports (including those in departments such as Traffic, Marketing, Contracts, Security, Legal, Public Relations, Engineering, Executive Office).

Violations and Penalties
◆ Procedures for notification of potential violations, including use of voluntary disclosure and Ombudsman to report any violation of the company’s internal control program or U.S. export controls.
◆ Emphasis on importance of compliance (to avoid jeopardizing corporate [institutional] business and severe sanctions against the corporation [institutional] and responsible individuals).
◆ Description of AECA/ITAR penalties.
◆ Written statements and procedures to foster employee discipline (e.g., keying certain types of advancement to compliance understanding and implementation, and establishment of internal disciplinary measures).
¶3430.4 Export Controls Program Technical Assistance

AIS editors

The following are the nine key elements identified by the Bureau of Industry and Security (BIS) for any effective compliance program for an exporter of U.S.-origin dual-use items. The following elements provide a foundation for the basic structure of an export management and compliance program (EMCP), according to BIS, but they do not constitute an exhaustive list:

- Management commitment
- Continuous risk assessment of the export program
- Formal written EMCP
- Ongoing compliance training and awareness
- Export compliance security and screening throughout the export life-cycle
- Adherence to recordkeeping regulatory requirements
- Compliance monitoring and periodic audits/assessments
- Internal program for handling compliance problems, including reporting and escalating export violations
- Completing appropriate corrective actions in response to export violations

Implementing an EMCP is voluntary. According to BIS in its publication, Compliance Guidelines: How to Develop an Effective Export Management and Compliance Program and Manual (www.bis.doc.gov/complianceandenforcement/emcp_guidelines.pdf), the major benefit of implementing an effective EMCP is that it can “minimize the risk of noncompliance with export regulations and can be considered a mitigating factor, with great weight, in determining administrative penalties in case of an export violation.”

Characteristics of an EMCP

According to BIS, an export management and compliance program answers …


… your export control policies and procedures are to be implemented.

Benefits of a Compliance Program

BIS further presents the following as “benefits” of an EMCP:

- Reinforce senior management commitment to compliance with U.S. export laws and regulations to all parties within the institution.
- Provide management structure and organization for the processing of export transactions.
◆ Enhance accountability for export control tasks by identifying who is responsible for performing each part of the process and who is responsible for overall effectiveness of the EMCP.

◆ Provide compliance safeguards throughout a company’s supply chain to ensure order processing due diligence checks and screenings produce consistent export decisions.

◆ Provide written instructions for employees to blend into their daily responsibilities to “screen” export transactions against general prohibitions of exports, re-exports, and selected transfers to certain end-uses and end-users.

◆ Serve as a vehicle to communicate red flag indicators that raise questions about the legitimacy of a customer or transaction.

◆ Provide personnel with tools to help them ensure they are performing their export control functions accurately and consistently in all nine of the key elements.

◆ Identify transactions that could normally be exported without a license, but because of the end-use or end-user, require a license.

◆ Streamline the process and reduce time spent on compliance activities when employees have written instructions, tools and on-going training.

◆ Protect employees through training and awareness programs from inadvertently violating the EAR.

Seminars and Online Training

BIS also offers a variety of export compliance seminars and training at www.bis.doc.gov/seminarsandtraining/elsem.htm. Be sure to consult this site for details, especially on subjects covered by the program. BIS also offers a variety of online training modules and videos at www.bis.doc.gov/seminarsandtraining/seminar-training.htm.
Strategic Due Diligence: The Export Control Management and Compliance Program

M. Robin Witherspoon, The University of Tennessee at Knoxville

When I implemented our Export Control Management and Compliance Program at the University of Tennessee, Knoxville, six years ago, we were among the few U.S. universities with an established Export Control compliance program in place. However, in the last five years, research universities have been especially impacted by an even closer scrutiny of research activities and increasingly aggressive enforcement of export controls by U.S. government agencies.

Failure to comply with U.S. export controls can result in severe civil and criminal penalties (which can be assessed against both the institution and/or chargeable individuals). In addition to serious administrative, civil, and criminal consequences for violations of the export control laws, penalties may include the denial of research funding by federal agencies and negative publicity for the institution. Although many research institutions have now developed export control compliance programs, the challenge remains for other colleges and universities to establish strong programs that will not only guide and educate the institutions, but also manage export-related decisions and transactions to ensure compliance (May and MacNally, 2010).

What Are the Elements of a Good Export Control Compliance Program?

1. Senior Management Commitment: Securing the commitment of institutional leadership is critical by providing a cogent, high-level briefing on potential exposure and enforcement penalties. Focus on what export control issues and procedures are particularly relevant, the level of risk, how to manage compliance proactively, and internal resources (Commerce, 2010).

2. Centralize Export Control Compliance: Designate a centralized Export Control compliance officer tasked with the development of a compliance plan that ensures application of a uniform policy. It is important that this person have a good general knowledge of the three regulatory bodies of law: ITAR, EAR and OFAC and have experience communicating with all levels of faculty, staff, and government officials.

3. Export Control Risk Assessment: A high-level export risk assessment and resulting report enables the Export Control Officer to:
   - Methodically evaluate key points of exposure throughout the university,
   - Develop the level of procedural safeguards appropriate to the circumstances, and
   - Make recommendations for best practices to upper management.

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1 This article is reprinted from the NCURA Magazine, Vol. XLII, No. 7, December 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
4. Written Manual: A manual of policies and procedures with a sufficient level of operational detail to ensure effective implementation and day-to-day compliance.

5. Ongoing Campus-wide Compliance Training and Awareness:
   - Emphasize what faculty and staff can know without being export experts:
     ~ How to qualify for exclusions
     ~ When to get advice from the central office
     ~ The risks and penalties of noncompliance
   - Tailor presentations to departments.

6. A Dedicated Web Site: The site should include general export control information, a short summary of the regulations, controlled technologies and sanctioned countries. On our website, we’ve included a Decision Tree, special sections for faculty and staff; and online training will be offered this year.

   The purpose of an Export Management Compliance Program is to ensure that the right export decisions are consistently being made, that employees know their export control responsibilities, that the right procedures are being followed, and that the right questions are being asked (May and MacNally, 2010). The existence of an effective internal compliance program not only is a factor in preventing export violations, but also enables university staff to identify potential problems and take the necessary remedial action. In addition, internal compliance programs may also serve as a great mitigating factor when violations do occur. In view of the potentially severe consequences of export noncompliance, it is critical that U.S. institutions of higher education that do not have an export control compliance program closely examine their possible vulnerabilities and consider implementing export control compliance policies and procedures.

References


About the Author

Robin Witherspoon is the Export Control Officer and Facility Security Officer at The University of Tennessee at Knoxville. She holds a Bachelor of Arts in English and a Master’s degree in Education from the University of Tennessee. Ms. Witherspoon has been with the University for eleven years. Prior to joining UT, she served as a Paralegal in law firms in North Carolina and Tennessee. As Export Control Officer, Ms. Witherspoon implemented the first export control compliance program at UT, is the point of contact for all export control issues, and is a delegated empowered official.
Controlled Unclassified Information: An Emerging Problem

David Brady, Virginia Polytechnic Institute and State University (Virginia Tech)

Introduction

In 2008, the President of the United States introduced a new term of art for United States Government use: “Controlled Unclassified Information” (CUI). Ostensibly arising from the government’s interest in controlling classified and unclassified information related to combating global terrorism, under the aegis of several subsequent Presidential Memoranda, the executive branch of the federal government is now taking steps to implement a standardized framework for controlling unclassified information across all federal agencies. Proposed changes would extend government-wide controls on information beyond those statutorily authorized requirements to protect “national security”, and would restrict information pertinent to the national interests or policy of the United States or to the important interests of entities outside the Federal Government. The risk for the proliferation of CUI’s restricting university research is profound and likely to grow.

What is Controlled Unclassified Information?

Government control on unclassified information is not new. Over many decades, the federal government has controlled unclassified information in many disparate ways, under the umbrella headings of Sensitive Information and Sensitive But Unclassified (SBU) Information, among others (Figure 3430.6-1). However, as defined in the President’s May 7, 2008 Memorandum Designation and Sharing of Controlled Unclassified Information (CUI):

“Controlled Unclassified Information” is a categorical designation that refers to unclassified information that does not meet the standards for National Security Classification under Executive Order 12958, as amended, but is (i) pertinent to the national interests of the United States or to the important interests of entities outside the Federal Government, and (ii) under law or policy requires protection from unauthorized disclosure, special handling safeguards, or prescribed limits on exchange or dissemination. Henceforth, the designation CUI replaces “Sensitive But Unclassified” (SBU).

Since 2008, the process for developing a government wide framework and standard for CUI has continued under the current administration. The target for implementation of the CUI framework is 2013. In his May 29, 2009, Memorandum on Classified Information and Controlled Unclassified Information, President Obama called for the establishment of an Interagency Task Force on CUI, which formed and met in 2009 and distributed its Report and Recommendations of the President’s Task Force on Controlled Unclassified Information in December, 2009. Outside of the Federation of American Scientists, no organization related to higher education was con-
sulted by the Task Force.

The Report identified 107 distinct SBU regimes currently in use by federal agencies, and 117 distinct existing SBU markings. In the interest of standardizing application of CUI throughout the federal government, the Task Force, recommended a revised definition: “All unclassified information for which, pursuant to statute, regulation, or departmental or agency policy, there is a compelling requirement for safeguarding and/or dissemination controls.” (Task Force, 2009)

The Task Force also called for a Presidential moratorium on definition or development of new SBU categories outside of the CUI Framework, which at the time of this article has not been enacted. In the absence of a moratorium, at least one new sweeping category of SBU—“DoD Information,” has been defined in an Advanced Notice of Proposed Rulemaking by the Department of Defense (DFAR, 2010).

Protected Critical Infrastructure Information (PCII) – a CUI Case Study

Though the origins and purposes of CUI vary widely by agency, some categories of information are authorized by statute for control. Setting aside the better known export control regimes of Export Administration Regulation (EAR), International Traffic in Arms Regulations (ITAR), and Export and Import of Nuclear Equipment and Materials Regulations, there are at least seven other regimes of CUI with statutory designation.

Many colleges and universities have already encountered three of these regimes of controlled unclassified information,1 established in the wake of 9/11, which have potential for government-imposed civil and criminal penalties for misuse of their information, including:

Protected Critical Infrastructure Information (PCII), under the jurisdiction of the Department of Homeland Security (DHS), Critical Energy Infrastructure Information (CEII), under the jurisdiction of the Federal Energy Regulatory Commission (FERC), and Sensitive Security Information (SSI) under joint regulation by the Transportation Security Administration (TSA) and Department of Transportation (DOT).

Rules for access, control, and dissemination of CUI under these regimes are not standardized. The most rigorously controlled of these regimes appears to be Homeland Security’s PCII. The PCII control regime is illustrative of the extent to which the federal government can now procedurally restrict unclassified information. PCI Information includes information regarding the security of critical infrastructure and protected systems, analysis, warning, interdependency study, recovery, reconstitution, or other informational purpose. PCI includes information generated by nonfederal agencies (e.g., municipalities, power and communication utilities, computer and internet companies, and energy distribution systems). Some examples of PCI might include gas pipeline roving security schedules, and power grid safety device or critical internet node locations. This information becomes PCI only when designated by DHS.

It is worth reviewing the extent to which DHS has developed procedures for controlling PCI in some detail, as the President’s Task Force was “impressed” with
the DHS guidelines for PCII control, and further opined that the PCII safeguarding standards “can be achieved with reasonable and appropriate efforts by non-federal partners” - e.g., colleges and universities. PCII controls may well become the government’s model for securing more types of CUI in the future.


Figure 3430.6-1. Sensitive But Unclassified (SBU) Markings Currently in Use

1. SENSITIVE
2. DO NOT DISSEminate
3. SBU-NF
4. SBU/ NOFORn
5. UNLIMITED RIGHTS
6. GOVERNMENT PURPOSE RIGHTS
7. LIMITED RIGHTS
8. RESTRICTED RIGHTS
9. SPECIAL LICENSE RIGHTS
10. PRE-EXISTING MARKINGS
11. COMMERCIAL MARKINGS
12. CLOSE HOLD
13. RSEN
14. PREDECISIONAL PRODUCT
15. SOURCE SELECTION SENSITIVE
16. DEA SENSITIVE (DEA S)
17. SENSITIVE (SENS)
18. COPYRIGHT (DATE) (OWNER)
19. RELIDO
20. EYES ONLY
21. BANk SECREcY ACT INFORMATION (Bsa)
22. ACQUISITION SENSITIVE
23. ATTORNEY WORK PRODUCT
24. LIMITED ACCESS
25. RESTRICTED ACCESS
26. MEDICAl RECORDS
27. LAN INFRASTRUCTURE
28. IT SECURITY RELATED
29. LAN BACKup SENSITIVE INFORMATION
30. SOURCE SELECTION INFORMATION
31. TRADE SECRET
32. ATTORNEY CLIENT
33. BUDGETARY INFORMATION
34. PRE-DECISIONAL,
35. FOR INTERNAL USE ONLY
36. NOT FOR DISTRIBUTION SAFEGUARDS
37. AGENCY INTERNAL USE ONLY (U//AIUO)
38. NO DISTRIBUTION (NODIS OR ND)
39. SENSITIVE BUT UNCLASSIFIED (SBU)
40. HEALTH RELATED INFORMATION (EM)
41. SENSITIVE STUDENT RECORDS (STR)
42. TREATMENT INFORMATION (T3)
43. CONFIDENTIAL BUSINESS INFORMATION (CBI)
44. EXCLUSIVE DISTRIBUTION (EXDIS OR XD)
45. LIMITED DISTRIBUTION (LIMDIS)
46. LIMITED DISTRIBUTION (LOU)
47. CONTRACTUAL SENSITIVE INFORMATION (CSI)
48. LIMITED OFFICIAL USE INFORMATION (LOUI)
49. LIMITED DISTRIBUTION (LOU)
50. LIMITED DISTRIBUTION (LIMDIS)
51. LIMITED DISTRIBUTION (LOU)
52. LIMITED DISTRIBUTION (LOU)
53. ORIGINATOR CONTROLLED (ORCON)
54. CONTRACTUAL SENSITIVE INFORMATION (CSI)
55. ENFORCEMENT CONFIDENTIAL INFORMATION (ECI)
56. LIMITED OFFICIAL USE INFORMATION (LOUI)
57. SENSITIVE SECURITY INFORMATION (SSI)
58. TITLE III COMMUNICATIONS (T3)
59. FEDERAL TAXPAYER INFORMATION
60. TECHNOLOGY TRANSFER INFORMATION
61. FEDERAL TAXPAYER INFORMATION
62. BOMB TECH SENSITIVE (BTS)
63. CONTROLLED NUCLEAR INFORMATION
64. RESTRICTED BY COURT ORDER (CO)
65. LIMITED USE ONLY (LUO)
66. BOMB TECH SENSITIVE (BTS)
67. PROPRIETARY INFORMATION (PROPIN)
68. CHILDVICTIM/WITNESS (CH)
69. FINANCIAL RECORDS (NON-NSL) (FR)
70. FINANCIAL RECORDS NSL (NSLF)
71. LIMITED USE ONLY (LUO)
72. LIMITED CREDIT INFORMATION NSL (NSLC)
73. SELECT AGENT SENSITIVE INFORMATION (SASI)
74. CALEA COST RECOVERY INFORMATION (CALEA)
75. PRIVACY ACT PROTECTED INFORMATION (PAPI)
76. SENSITIVE TREATY/MOU/nda INFORMATION (STM)
77. PRIVILEGED FBI ATTORNEY CLIENT
78. OFFICIAL USE ONLY-SMALL BUSINESS
79. OFFICIAL USE ONLY-PROTECTED COOPERATIVE CENSUS CONFIDENTIAL
80. SBU-GSA-BI
81. OFFICIAL USE ONLY (OOU)
82. ATTORNEY/ CLIENT PRIVILEGED
83. GRAND JURY MATERIAL (FGJ)
84. OFFICIAL USE ONLY-APPLIED TECHNOLOGY
85. DOD UNCLASSIFIED CONTROLLED NUCLEAR INFORMATION (U//DCNI OR U//ECNI)
86. GRAND JURY MATERIAL (FGJ)
87. CONTROLLED NUCLEAR INFORMATION (DOUCNI)
88. CONTROLLED NUCLEAR INFORMATION (U//DCNI OR U//ECNI)
89. CHEMICAL-TERRORISM VULNERABILITY
From the perspective of an institution of higher education, the formalization of control on access and dissemination of information required in the PCII Procedures Manual is eye-opening, to say the least. There is more than a passing similarity to controls required for information classified for national security (Confidential, Secret, and Top Secret) under the National Security Policy Operating Manual (NI-SPOM). Yet, this DHS PCII manual represents the agency-authorized controls for unclassified information.

To bring PCII to your campus, your institution or state must first be accredited with DHS to have access to PCII, and must have a designated PCII Coordinator. FBI background checks are required for employees and nonemployees (e.g., students) with access to such information. Nondisclosure agreements, with terms objectionable to many universities, are required. Government training is mandatory for anyone with access to PCII.

Document marking and control procedures imitate regulations governing classified material requirements for packaging (double wrapping required), coversheets, and rules governing derivative marking, and document marking requirements-the latter with portion (paragraph by paragraph) marking of any document containing PCII. There are document destruction procedures, and requirements to report lost or misuse to the federal government.

Even universities well versed in dealing with export restricted information may find the procedural requirements of PCII to be challenging and administratively burdensome. The other post 9/11 security regimes of CUI, CEII and SSI, do not have the same level of procedural security restrictions (yet). CEII is controlled
through a web of FERC orders, issued in no apparent order.

TSA’s SSI is reportedly controlled through DHS Instruction for Safeguarding and control IAW DHS MD 2810.1 SSI Program and the TSA SSI Policy and Procedure Manual; however, the TSA SSI Manual does not appear to be published yet.

**CUI and University Research**

Academic researchers have already encountered PCII, CEII, and SSI in their sponsored research activities. The Department of Homeland Security issues block grants to state homeland security departments and some of these monies are being used to fund research at colleges and universities. Power utilities have been restricting information relating to their facilities since 2002. DHS and TSA have been restricting their information since 2004. As the framework for CUI continues to be developed by the executive branch of the government, and applied across more federal agencies, more government furnished unclassified information will be controlled, at worst case for universities, using procedures patterned along the lines of DHS’ PCII Manual.

Research Administrators will find CUI terms and conditions creeping into many different research instruments, including memoranda of understanding, nondisclosure agreements, grants, cooperative agreements, and contracts. Some interdepartmental coordination will likely to be necessary to accommodate the more sophisticated controls required by federal agencies such as DHS (e.g., research compliance, sponsored programs, and academic units). When accepting CUI, each institution should develop a clear understanding of the administrative burden associated with security restrictions required for custody of the information, and how those responsibilities are allocated among academic and administrative units. Faculty will need to understand the effect CUI can have on peer review, publishing, and student participation, particularly those projects involving CUI in thesis research. As the federal government continues down its path to develop a CUI framework across all executive agencies, the problem of Controlled Unclassified Information will be a growing one for higher education, and one that is unlikely to go away.

**References**


U.S. Government Office of the Federal Register, National Archives and Records Administration.


About the Author

David Brady is the Director of the Office of Export and Secure Research Compliance at Virginia Polytechnic Institute and State University (Virginia Tech). David is the university’s Empowered Official and is responsible for ensuring university-wide export and trade sanctions compliance in both classified and unclassified research at the university. He has also served as Virginia Tech’s senior contract negotiator for the Office of Sponsored Programs. David is a graduate of the United States Naval Academy, a former Navy nuclear propulsion engineer and consultant to DARPA on advanced submarine technologies. He is the past chair of the Association of University Export Control Officers (AUECO).
Understanding U.S. Sanctions Regulations in the University Setting

Jessa Albertson, University of Oklahoma

As universities continue to expand their global presence and operate in an international setting, it is important for the higher education community to be aware of economic sanctions administered by the U.S. Treasury Department’s Office of Foreign Assets Control (OFAC). Sanctions regulate transactions involving targeted individuals, property, and governments and can impact a much wider scope of academic activity beyond the traditional export control focus on sponsored research. Regulated transactions can include imports, exports, financial transactions, investments, donations, and services of value involving targeted property or governments. In contrast to the Export Administration Regulations (EAR) and the International Traffic in Arms Regulations (ITAR) (whose applicability depends largely upon items and technologies involved), it is possible to encounter activity subject to sanctions while conducting a wide range of common university activities, including those regularly exempted as “educational information” (EAR § 734.9) or “fundamental research.” (EAR § 734.8) This article is intended to be a brief introduction of how the Foreign Assets Control Regulations (FACR) administered by OFAC apply to university activity.

Targeted People, Property, and Governments

OFAC administers sanctions programs that target foreign governments, individuals, and practices. The majority of these programs are regime or list-based, meaning that the targets can be found on a list or fit a certain criteria such as Specially Designated Nationals (SDNs). Screening transactions for restricted parties can be an efficient way to reduce your institution’s risk of violating list-based sanctions.

In addition to regime and list-based sanctions programs, OFAC administers comprehensive sanctions against Cuba, Iran, and Sudan. Comprehensive sanctions are the most stringent programs and contain broad prohibitions and narrow licensing opportunities. Prohibitions, exemptions, and licensing policies vary from program to program. However, there are general consistencies among the programs that can lead to a greater understanding of the regulations.

Prohibitions

As one might assume, physical exports to sanctioned countries are heavily regulated and a license is generally required (FACR §§ 515.201, 560.204, 538.205). OFAC and BIS may share licensing responsibility for physical exports and depending on the country; a license may be required from BIS, OFAC, or in the case of Sudan, both. OFAC licenses all exports, including EAR99 items while BIS licenses items that are found on the Commerce Control List (CCL); therefore, proposed exports may need authorization from both BIS and OFAC.

The restrictions on physical exports also regulate the exportation of services to...
Cuba, Iran, and Sudan and the exportation of financial services to Burma (Myanmar) (FACR § 537.202). A professor’s giving a guest lecture at a university in Tehran, a faculty member’s corresponding via e-mail with a student located in Cuba regarding a recent publication, or a department’s providing distance learning services to a student located in southern Sudan may be considered “services of value” and prohibited without a license. Even though these activities would fit the definitions of “educational information,” or “fundamental research” found in other export control regulations, the services associated with them is beyond the “information and information materials” (FACR §§ 515.206(a), 560.210(a), 538.212(c)) exemption in FACR comprehensive sanctions and would be prohibited without authorization.

Comprehensive sanctions programs also regulate imports. OFAC prohibits the importation of Burmese-origin goods (FACR, § 537.203) and the importation of goods and services from Cuba, Iran, and Sudan (FACR, §§ 515.201 & 204, 560.201, 538.204). In general, OFAC regulations do not apply to individuals from sanctioned countries who are located in the U.S. on valid visas and are engaging in activities for which their visas were issued (FACR, §§ 515.571(a)(5), 560.505, 538.312(c)). The Iranian Transaction Regulations stipulate that immigrant visa categories and individuals who qualify for E-2, H, and L visas and are authorized to engage in activities for which their visas were granted as long as they are not agents, employees, or contractors of the Government of Iran or a business entity or other organization in Iran (FACR, § 560.505(c)). Now that many universities have instituted review processes to comply with the recent required export control certification on Form I-129 for H-1B, H-1B1, L-1, or O1A petitioners, it is easier to screen for this issue.

A prohibition that is unique to Cuba is the extensive ban on engaging in transactions in which Cuba or a Cuban national has interest (FACR, § 515.201). One result of this broad prohibition is that travel to Cuba is prohibited without a license, even if the travel is paid for by a third-country national or entity. However, several categories of academic travel are authorized pursuant to general licenses (FACR, §§ 515.564, 565). Recent regulatory changes allow for more educational travel pursuant to either a general or specific license (CACR).

**Exempt Transactions**

Exemptions contained in comprehensive sanctions programs differ from those contained in the EAR and the ITAR. “Fundamental research” and “educational information” are concepts not found in sanctions exemptions. Instead, categories of activities such as personal communications, humanitarian donations, and information and informational materials are exempt from regulations (FACR, §§ 515.206, 560.210, 538.212). The information and informational materials exemption is not as encompassing as may be expected. Only information and informational materials (books, films, etc.) that are “fully created and in existence” at the time of the transactions are exempted. This caveat precludes revisions, collaboration, and co-authorship related transactions with individuals located in the comprehensively sanctioned countries of Cuba, Iran, and Sudan. Transactions not included in the exemption may be authorized pursuant to a general license discussed in more detail.
later in this article.

The Sudanese Sanctions Regulations contain a provision exempting certain areas of Sudan, referred to as Specified Areas of Sudan or SAS, from most prohibitions. In general, imports from, and exports to the SAS are not prohibited. However, the transshipment of goods or financial services through the SAS, transactions involving blocked property and transactions involving the petroleum or petrochemical industries in Sudan are prohibited regardless of whether or not they occur in the SAS (FACR, § 538.212(g)). It is also important to remember that the SAS exemption is unique to OFAC regulations and is not applicable to BIS regulations. Thus, any physical export to Sudan, regardless of whether the destination is in a SAS, requires approval from BIS or must qualify for one of the few BIS license exceptions available for Sudan.

In addition to the exemptions above, transactions incident to travel are exempted from regulation—except in the case of Cuba. This includes accompanied baggage for personal use, payment of living expenses in-country, and purchasing goods or services for personal use in-country (FACR, §§ 560.210(d), 538.212(d)). Personnel traveling to sanctioned countries with university equipment should be aware that the commonly relied upon BIS license exception for the temporary export of “tools of the trade” are limited (EAR, § 740.9), or in the case Iran not available at all (EAR, § 746.7(c)).

**Licenses and Country-Specific Provisions**

One constant throughout OFAC’s regulations is the concept of two license types: general licenses and specific licenses. A general license is blanket authorization for an otherwise prohibited transaction if certain criteria are met. The applicability of the general license is self-determined, meaning no official written authorization or other involvement from OFAC is required (FACR, § 501.801(a)). Several general licenses are particularly useful to universities and will be covered in more detail later in this article. A specific license is official written authorization from OFAC to engage in a regulated activity. A written application and subsequent approval are required (FACR, § 501.801(b)). Each sanctions program identifies several specific licenses that OFAC will consider.

Several categories of travel-related transactions involving Cuba and academic institutions are authorized pursuant to general licenses. If travel to Cuba is authorized by a general license or by a specific license, then transportation-related transactions and transactions incident to living expenses are also authorized (FACR, § 515.560(c)). One general license is for professional research and professional meetings in Cuba (FACR, § 515.564(a)(1)). To qualify for this general license, the traveler must be a full-time research professional who will be conducting professional research in his or her professional area. The research must be academic with a “substantial likelihood” of being published. The research must encompass a full work schedule and cannot include any tourist activities.

Another general license authorizes travel transactions that are directly related to professional meetings that are organized by an international professional organiza-
tion. To qualify, the sponsoring organization cannot be headquartered in the U.S.
unless the organization has received a specific license from OFAC to host the meet-
ing. The purpose of the meeting cannot be the promotion of tourism to Cuba, or to
encourage production of biotechnical products (FACR, § 515.564(a)(2)).

Since January, university faculty, staff and students have been able to engage in
the following transactions pursuant to a general license:

- Activities related to an educational program (sponsored by the American
  institution or a formal course of study at a Cuban academic institution) in
  Cuba as long as the coursework will be accepted for credit towards the trav-
eler’s degree
- Graduate student academic research related to Cuba
- Teaching sponsored by the home institution to teach at a Cuban academic
  institution, as long as the teaching assignment lasts 10 weeks or longer
- Sponsoring a Cuban scholar to teach or conduct research.

Travelers must carry a letter from the sponsoring institution attesting to the
applicability of the general license and signed by a “designated representative of
the sponsoring U.S. academic institution” which is defined as “a person designated
by the relevant dean or the academic vice-president, provost, or president of the
institution as the official responsible for overseeing the institution’s Cuba travel
program” (FACR, § 515.565(d)). Adjunct professors and part-time staff are eligible
for the general licenses, and students may be sponsored by an academic institution
other than their own to engage in academic activities in Cuba.

Once authorized to travel to Cuba, travelers must make reservations through
a Travel Service Provider (TSP) that has been authorized by OFAC to make such
arrangements. The TSP will require certification that a general license applies or, if
required, a copy of the specific license.

Perhaps most helpful for universities is the general license authorizing activities
related to publishing. It authorizes transactions “necessary and ordinarily incident
to” the publishing process, including collaboration, editing, and augmenting pub-
lications with graphics, explanatory texts, or translations that are not exempted as
information and informational materials. The general license does not authorize any
physical exports, the involvement of the Governments of Burma (Myanmar), Cuba,
Iran, or Sudan or any other transaction that is not necessary and ordinarily associ-
ated with publishing and marketing activities (FACR, §§ 537.526, 515.577, 560.538,
538.529).

As a result of the Iranian civil protests of June 2009, OFAC implemented a
general license authorizing the exportation of services to promote the exchange
of personal communications over the internet such as instant messaging, e-mail,
social networking, and blogging. Services must be free and publically available
and software must be EAR99, Mass Market 5D992, or not subject to the EAR. The
general license does not authorize any exports to the Governments of Cuba, Iran, or
Sudan and does not authorize commercial web-hosting (FACR, §§ 515.578, 560.540,
538.533). Universities that conduct U.S. Government-sponsored research or other
activities in Sudan may find that their work is authorized via a general license that authorizes official activities of the U.S. Government and their contractors or grantees (FACR, § 538.531).

OFAC identifies several situations in which they may issue a specific license for activity that goes beyond what is covered in a general license. Most transactions incident to a licensed transaction (general or specific) are authorized (FACR, §§ 560.405, 538.405). Cuba, in particular, has several specific licenses available that are helpful to universities. Specific licenses may be authorized for the importation of research samples from Cuba (FACR, § 515.547). Travel-related transactions not covered by a general license may be available pursuant a specific license. For example, specific licenses may be authorized for multiple trips to Cuba by a research professional (FACR, § 515.564(b)), educational exchanges not involving academic coursework toward a degree, or sponsorship of academic meetings related to Cuba (FACR, § 515.565(b)(2) and (3)).

Applying for a license from OFAC is less formalized than other export licensing agencies. An exception is travel to Cuba pursuant to a general license or specific license. Guidance and forms relating to Cuban travel can be found on OFAC’s website (OFAC). For most other license applications relevant information may be supplied in letter format (FACR, § 501.801(b)(2)). If granted, licenses may include provisos and can be amended, modified or revoked by OFAC at any time (FACR, § 501.803). Regardless of whether or not an activity required a license (general or specific), complete records must be kept for a period of five years after the date of any transaction subject to sanctions regulations (FACR, § 501.601).

Assessing Risk
Identifying activities subject to sanctions regulations can be a challenge in the university setting because the transactions may not get flagged in the same way that other export control issues do. For example, the transaction may not be an export and it may not be tied to a written agreement. It may even be considered fundamental research. OFAC will consider the presence and scope of an institution’s risk-based compliance program when determining a response to a potential violation (FACR, App. § 501 at III.E). Appendix A to Part 501 contains the Economic Sanctions Enforcement Guidelines and is an excellent resource for institutions developing or auditing the OFAC compliance section of their export control management systems. When developing institutional practices to address OFAC issues, it is essential to begin with identifying the institution’s most risk-prone areas. Once the risks are identified, written policies and procedures can be developed to address the issues.

Conclusion
The information contained in this article is intended to be a brief overview of the mechanics of economic sanctions and to identify regulatory requirements, exemptions, and authorizations that are relevant to universities. Sanctions regulations and policies change quickly in response to world events. Every situation is unique, and there is no substitute for a thorough reading of the regulations. As universities become more global and the world becomes more connected, a comprehensive under-
standing of OFAC regulations is essential for compliance.

References:


Export Administration Regulations (EAR), 15 C.F.R. § 730-774.

Foreign Assets Control Regulations (FACR), 31 C.F.R. § 500-599.

International Traffic in Arms Regulations (ITAR), 22 C.F.R. § 120-130.


About the Author

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13430.8   **NARA Issues Final Rule on Controlled Unclassified Information**

Tina Reynolds, Morrison & Foerster LLP

A year and four months after its proposed rule, and nearly six years after the Executive Order that called for the standardization of handling requirements for Controlled Unclassified Information (CUI), the National Archives and Record Administration (NARA) issued its final rule on CUI last week (81 FR 63324, September 14, 2016).

The final rule is the outgrowth of Executive Order 13556, Controlled Unclassified Information, 75 FR 68675 (November 4, 2010). This Executive Order gave NARA the authority to “establish an open and uniform program for managing [unclassified] information that requires safeguarding or dissemination controls” to replace the ad hoc, patchwork approach used by federal agencies in the absence of uniform guidance. NARA issued a proposed rule on May 5, 2015 (80 FR 26501). We addressed the proposed rule and the maze of regulations relating to the safeguarding of non-classified government information in a previous article.

With this final rule, NARA seeks to clarify and make uniform the treatment of CUI across the federal government. In addition to specifying requirements within the final rule itself, NARA is also establishing and maintaining a CUI Registry, which will be the central repository for all guidance, policy, instructions, and information pertaining to CUI.

While the final rule directly applies only to federal agencies, the requirements indirectly extend to government contractors and grantees by virtue of the directive that agencies include the CUI protection requirements in all federal agreements that may involve CUI. A pending FAR case and anticipated forthcoming regulation will further implement this directive for federal contractors.

In accepting and rejecting comments on the proposed rule for purposes of the final rule, NARA recognized the tension between the dual federal government goals of protecting and sharing information. NARA’s revisions were designed “to more clearly explain how the different levels of CUI interact, the basis for CUI controls, what levels of controls agencies may impose,” as well as to establish rules pertaining to agency agreements, and marking, destruction, and dissemination of CUI.

After this final rule, information provided by or developed for the government falls into one of four categories, as described below:

◆ **Classified Information:** This refers to information required by Executive Order 13526, “Classified National Security Information,” or predecessor or successor orders, or the Atomic Energy Act of 1954, to be marked with a classification designation to protect it from unauthorized disclosure.

◆ **CUI Basic:** CUI is information created or possessed by or for the government for which a law, regulation, or policy requires or permits safeguarding or dissemination controls. CUI Basic is the subset of CUI for which no particular controls are specified. This final rule provides uniform handling controls to be used for CUI Basic, which requires protection at no less than a “moderate”
confidentiality standard under the Federal Information Systems Modernization Act (FISMA), 44 U.S.C. 3541, et seq. CUI Basic documents can be marked simply as “CUI” or “Controlled.”

◆ **CUI Specified**: CUI Specified is that subset of CUI for which applicable law, regulation, or policy provides specific handling controls that differ from the controls that apply to CUI Basic. Under the final rule, the specified controls are to continue to be used for this subset of CUI and the markings prescribed for these particular categories of information should continue to be used. Examples of CUI Specified information are information that is export controlled or source selection information.

◆ **Uncontrolled Unclassified Information**: All remaining information that is neither classified nor CUI. Although not controlled or classified, this information must still be handled as required by FISMA.

The final rule incorporates by reference various Federal Information Processing Standards (FIPS) and National Institute of Standards and Technology (NIST) Special Publications (SP), namely:

◆ FIPS Publication 199, Standards for Security Categorization of Federal Information and Information Systems;

◆ FIPS Publication 200, Minimum Security Requirements for Federal Information and Information Systems;

◆ NIST SP 800-53, Security and Privacy Controls for Federal Information Systems and Organizations;

◆ NIST SP 800-88, Guidelines for Media Sanitation; and

◆ NIST SP 800-171, Protecting Controlled Unclassified Information in Nonfederal Systems and Organizations.

These standards must be applied to systems that involve CUI in conjunction with the framework established by FISMA.

The final rule is effective November 14, 2016. It is not known when the proposed companion FAR clause will be released. Until that time, agencies will need to address CUI handling requirements in contracts and grants through use of their own language.

Although the final rule specifies that agencies must include in agreements directions to comply with the final rule and the CUI Registry when handling CUI, the absence of uniform agreement language at this point in time may create the same sort of confusion and inconsistency that the final rule is designed to address. We will carefully monitor release of the proposed FAR rule and any comments thereto in order to provide the most current information to our client federal contractors.

Communicating a Constructive Compliance Message

Aurali Dade, George Mason University, and Suzan DiBella, University of Nevada, Las Vegas

Presentations on export control often start with examples of serious ramifications of violations, from large institutional fines to prison time for researchers. While this tactic may serve some useful purposes, the practice creates an air of fear and a certain degree of loathing of the topic among university researchers. What can export control experts do to communicate more constructively about the topic?

If you have worked in research administration for some time, chances are that you have attended a presentation or had a discussion related to the topic of export compliance. Chances are also good that someone mentioned the word “prison” during this discussion or presentation.

It might have been part of a rhetorical question, as in, “Did you know that an export control violation could lead to prison time?” Or, the statement might have been more specific, as in, “One researcher actually went to prison for an export control violation.”

It’s quite common for presenters on the subject of export control to open training sessions with discussion of the most extreme consequences of violations. This practice may have developed, at least initially, because there was a widespread lack of awareness of new and evolving regulations in the area. There may have also been a degree of disbelief among faculty and staff that such consequences could apply to academic researchers; presenters frequently face incredulity about implementation of regulations that seemingly run counter to the mission of the research university. Given this environment, some rhetorical “scare tactics” may have previously seemed warranted to bring attention to these regulations, which have very serious institutional and individual consequences if violated.

Why Export Control Compliance Is Difficult To Discuss

Universities embrace the fundamental mission of advancing knowledge through basic research and creative activities, extending knowledge through provision of a liberal education of students that allows them to think creatively and understand broad topics, and disseminating knowledge through publication and civic engagement (Rosenstone, 2003). Within this mission are the implicit themes of openness and academic freedom. Research administrators with responsibilities for implementing compliance programs can find themselves accused of trampling on or not understanding these values. This is especially true when universities work to implement or improve export compliance programs.

Export compliance laws have received increased attention from universities over the past decade. The central goal of these laws is protect and control information and materials that are crucial to the United States for reasons of national or

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economic security. (For a more detailed discussion of export control laws and the related risks that universities face, see Brady, Peloso, and Rowold, 2015.)

As described by Epley (2013), these laws apply not only to the transfer of information and materials out of the country, but also to the transfer of these materials to foreign nationals within the U.S. Universities enjoy specific exceptions to these controls through the fundamental research exclusion, public information exclusion, and other mechanisms. However, most universities still must have a program that brings attention to and guides compliance with export control regulations, especially with regard to sponsored projects, research teams’ travel to foreign countries, and/or the activities of visiting students and other individuals from sanctioned countries. Faculty who learn of export control restrictions for the first time may find the controls not only burdensome, but also somewhat objectionable; they may take exception to the very idea of the government having a say in what information they can share. This is where a strong communication plan is especially critical for the compliance program.

Use of Rhetorical Scare Tactics

Using scare tactics may work for grabbing attention, but, according to Walton (2000), social scientists have mixed views on their effectiveness. Appeals to fear can be powerful tools, but when the threat of fear is seen as unsubstantiated, such an appeal is considered a fallacious argument (Walton, 2000). In the context of export control training, use of this rhetorical device may negatively impact audience trust in the presenter and his/her information if audience members feel the threat is not realistic or is not applicable to them.

In all fairness to presenters using this tactic, they’re just doing what they’ve been told: In public speaking 101, students are instructed to gain audience attention in their introductions. Techniques for doing so vary, but one standard method is providing a shocking fact or statistic. The practice of opening a training session with the story about the faculty member who went to prison for export control violations certainly fits the bill; it is indeed shocking. Frankly, the thought of any university researcher being held personally responsible – and possibly even sentenced to jail time – is surprising to most people previously unaware of the regulations.

And, given the typical density and detail involved in the sea of federal regulations applicable in research, the threat of prison time seems, well, newsworthy. It’s exciting to discuss federal regulations where there are such palpable, even gritty, consequences of a violation. Reading most federal regulations, as the joke goes, is a sure-fire cure for insomnia. Export control, on the other hand, actually garners the interest of FBI agents, who regularly visit college campuses to learn about research activity with export control implications.

Yet, use of attention-grabbing headlines goes only so far in the export control training context. A well-reasoned methodical approach is a better choice, and certain basic tenets must be communicated. Most presenters discussing export compliance wish to convey the following information:

◆ These laws exist, apply to the university setting, and have serious consequences
if violated;
◆ Universities enjoy several important exceptions for work occurring on their campuses;
◆ Some grants and contracts specify controls, and, if the award is accepted, these controls must be put in place;
◆ Travel and shipping materials outside of the U.S. can trigger export controls (but there are also some exceptions); and
◆ Most importantly, researchers should contact the export compliance office with questions and for assistance.

Presentations that focus too heavily on consequences of noncompliance have the strong potential to distract and detract from the real messages presenters wish to convey. Employing a few key principles will help presenters develop a constructive approach to discussing export control.

**Key Principles for Communicating about Export Control**

**Consider your audience.** For mixed audiences with individuals unfamiliar with export control, avoid extensive discussion of extreme scenarios involving jail time. Remember that the first reaction to discussion of export control-related prison sentences will be one of alarm. Because export control issues are not relevant to most university research, many individuals will likely be relieved to learn that they will not be impacted. Others may just want to hear about the instances in which export control regulations are applicable to their research. For those with research or equipment with probable export control implications, the reaction to discussing prison sentences may be more concerned, perhaps even angry; they may react negatively to the suggestion that they could be lumped in with those who have violated the regulations.

**Prepare well-defined solutions to share.** Come prepared with examples of how to resolve export control issues. Be familiar with the areas of research of the person or persons involved in the discussion, and provide specific examples of technology and information that are controlled as well as management plans used within the discipline. Seek examples and guidance on successful solutions from colleagues at other universities if you are unfamiliar with a given area.

**Focus on support.** Make the focus of the discussion the support that your office is able to provide in this complex area. Highlight the steps you have already taken to enhance the institutional program and provide examples of real-world situations in which you have assisted researchers with compliance. Point the audience to information and resources and any pertinent forms that you have developed (all of which are provided on your website, ideally). Give examples of your office’s activities that support and assist researchers in complying with the rules, and emphasize your institution’s commitment to compliance.

**Tell them what’s in it for them.** Highlight the fact that these laws apply whether or not faculty and staff previously knew about them. Emphasize that the support
being provided by the institution enables them to be secure in the knowledge that they are complying with the law, thereby reducing their personal liability. Convey that you are able to provide the expertise in this area so that they can focus on the research that is important to them.

Taking a constructive approach sends a message to faculty and staff that you are their partner in addressing export control issues. It also reinforces the service orientation that research administrators seek to convey. In the end, using the above techniques rather than shocking stories is more likely to enable you to meet your goals of education and partnership in building a culture of compliance.

References


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¶3490  Knowledge Check
AIS editors

The Q&As at ¶3490.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3400 has been understood. Note: For the answer key for ¶3490.1, see ¶3490.3, which appears on a separate page (page 3490:5) for testing purposes.

Discussion topics at ¶3490.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶3490.1  Q&As

1. What is a deemed export?
   (a) The electronic transfer of financial assets controlled under the OFAC
   (b) The transfer of or access to technology controlled under the EAR or ITAR while a U.S. citizen is residing in a foreign country
   (c) The transfer of or access to technology controlled under the EAR or ITAR to a foreign person while in the United States
   (d) The electronic transfer of financial assets controlled under the OFAC to a U.S. citizen employed by a foreign government

2. To qualify under the public domain definition, software available on public Web sites must be
   (a) Available for download without any restrictions on access
   (b) Encrypted for proprietary use
   (c) Developed under specific protocols
   (d) Only available under limited circumstances

3. Dual use research is defined as research that could have both
   (a) Domestic and international use
   (b) Military and commercial value
   (c) Public-sector and private-sector use
   (d) Tax-exempt and taxable consequences

4. Items subject to the EAR are found on the
   (a) Specially Designated Nationals List
   (b) U.S. Munitions List
(c) Central Contractor Clearinghouse
(d) Commerce Control List

5. Department of Defense Trade Controls is located within which federal agency or department?
(a) U.S. Department of Defense
(b) U.S. Department of State
(c) U.S. Department of Commerce
(d) Army Research Office

6. The Simplified Network Application Process (SNAP) system is used for licensing under
(a) MTA
(b) OFAC
(c) ITAR
(d) EAR

7. As used in §3405, what does TCP mean?
(a) Technology Control Protocol
(b) Technology Certification Platform
(c) Technology Control Plan
(d) Temporary Certification Plan

8. The five-year recordkeeping requirement begins for OFAC
(a) On the date of the covered transaction
(b) On the date of the last export/re-export transaction
(c) On the expiration of the license
(d) On the date the award is accepted
13490.2 Discussion Topics

1. Why does the United States (and other countries) impose export controls?

2. A thorough review should be conducted to determine if information that is "proprietary" is "controlled." What does this mean and what are the best practices in this area?

3. In many universities, sponsored programs offices do not have exclusive control over export control policies and practices. If this is the case at your institution, what then is the proper role for the office of sponsored research at your institution and how can you effectively interact with those who do have oversight?

4. As the types of sponsored research activity at your institution might change over time, how can you help ensure that any new activities that could trigger export controls are considered?
\subsection*{3490.3 Answer Key}
Following are the correct answers to the questions included at \textsection{3490.1}.
\begin{enumerate}
\item (c) The transfer of or access to technology controlled under the EAR or ITAR to a foreign person while in the United States
\item (a) Available for download without any restrictions on access
\item (b) Military and commercial value
\item (d) Commerce Control List
\item (b) U.S. Department of State
\item (d) EAR
\item (c) Technology Control Plan
\item (a) On the date of the covered transaction
\end{enumerate}
PLACE TAB

¶ 3500

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Introduction

Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter covers international research collaborations, a topic of ever-greater interest because of the increasingly global activities of many institutions. This chapter provides a valuable starting place on topics relating to international collaborations and ways to manage such activities.

The 21st century is rapidly becoming the “age of globalization” where we are discovering just what New York Times columnist Thomas Friedman was talking about in his assertion that “the world is flat.” Most practitioners of research administration in the United States have grown up believing that research administration is a uniquely American profession that is generally unknown outside our borders. The belief is that even where some aspects of research administration may be practiced in other countries, it is primitive and underdeveloped when compared to the practice in the United States. Denise Wallen of the University of New Mexico and John Carfora of Loyola Marymount challenge these ethnocentric assumptions and open our eyes to the fact that there is a big wide world out there where research administrators from different countries and cultures are working together to develop successful international research collaborations.

Wallen and Carfora have provided a veritable treasure of resources in the form of an extensive bibliography and a directory of organizations concerned with international research collaboration. This “catalogue” includes professional societies, institutional consortia, government agencies, and more. There is no question that international research collaborations are increasing and there is every reason to believe that this aspect of our activity will continue to grow. In this chapter, a research administrator can avail himself or herself of a “Fodor’s Guide to International Research Collaborations.” Bon voyage!

Chapter 3500 will continue to respond to the information needs of research administrators over time through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶3505, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at ¶3520), practical tools (at ¶3530), case studies (at ¶3540), and statistics and survey results (at ¶3560). A “knowledge check” containing Q&As and discussion topics is included at ¶3590.
Building Toward Successful International Research Collaborations

John M. Carfora
Executive Director, Office for Sponsored Programs
Loyola Marymount University

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This chapter discusses how offices of sponsored programs (OSPs) — a term also referring to offices for research administration or offices for grants and contract management — can draw upon a number of effective strategies and recommended practices as they build toward successful international collaborations. “Successful international collaboration” means the cooperation of two or more international entities working together to develop, implement, and monitor meaningful agreements and related procedures for assuring a project moves forward — from conception to closeout — with maximum communication and professional cooperation on one hand, and with minimal administrative burden on the other hand.

It is recognized that many colleagues have both thematic and topical “how-to” questions pertinent to the practical conduct of international research administration. That said, the sheer depth and breadth of this topic will not, given the scope of this chapter, permit an in-depth discussion of many of those questions. Instead, readers should view this chapter as a “starting point” for many colleagues, both new and senior, who are just beginning to introduce the concept of international research administration to campus stakeholders. With this in mind, this chapter is a good portal to enter the conversation, and a first rate tool for facilitating meaningful discussions at one’s institution and with fellow research administrators in both the United States and abroad. Already the profession is taking a proactive approach, and the National Council of University Research Administrators (NCURA) fully supports this effort through its various professional development opportunities and training and education venues.

Note: A bibliography of selected sources, many of which are referred to in the text, and a list of international resources are included at the end of the chapter (see Figure 2, page 3505:17 and Figure 3, page 3505:19, respectively).

Developing Confidence in the Area of International Sponsored Research Administration

In addition to becoming familiar with the material in other chapters of this Guide, it is recommended that research administrators in the United States and abroad continuously stay abreast of developments within the profession, and conscientiously work to enhance their understanding and expertise across the many functional and managerial
areas that constitute sponsored research administration. This is essential for two rea-
sons as discussed below.

First, having a solid command of the workings and nuances of sponsored programs
administration in one’s own institution and country allows the research administrator
to answer international colleagues’ questions about research administration. Such
queries pertain to topics including the following:

◆ Recommendations of top-notch translational services, as well as guidance on
cultural questions about a particular country’s culture and professional customs
◆ Contractual and policy-related guidance on full economic costing
◆ Allowability of costs and documentation of in-country transactions
◆ Payment terms and required flow downs
◆ Appropriate certifications and assurances
◆ Publication rights
◆ Intellectual property
◆ Technology transfer
◆ Material transfer agreements
◆ Taxation
◆ Insurance
◆ Ownership and disposition of equipment
◆ General accounting and auditing issues
◆ Use of independent contractors
◆ Subrecipient monitoring
◆ Confidentiality agreements
◆ Human subject protection and animal care/use
◆ Governing law, dispute resolution, and use of arbitration
◆ Personal safety and security concerns
◆ Export controls

This rather broad list — though far from being collectively exhaustive — provides
an example of the topical and thematic concerns behind the growing interest in interna-
tional research administration. (See also the discussion at ¶3520.1.) In addition to the
above, non-Americans often ask for specific guidance involving language in proposed
agreements — particularly seeking clarification related to indemnification, intellectual
property, and publication rights (again to name but a few). Likewise, many non-
Americans are anxious to learn more about research administration in the United States
-especially with an eye toward offices providing both pre- and post-award services), so
they can better understand operational nuances of American research administration.
Queries from American and international colleagues — particularly from senior research managers — often seek guidance on how to best provide training and education to staff, as well as how to appreciably assure best practices and maintain institutional knowledge related to international research administration.

Second, that same command of the workings and nuances of sponsored programs administration in one’s own institution and country allows the research administrator to ask questions regarding how research administrators from another culture might approach a particular issue. At a minimum, the goal should be a desire to provide a highly proficient level of service and collaboration that develops a rapport and confidence between international colleagues.

The “body of knowledge” referred to in North America when speaking about the role, function, and place of sponsored research administration at U.S. and Canadian institutions is vast, and a comprehensive overview of its many purposeful areas can be found in the mainstay of publications that have come to define the standard by which North American-based research administration is understood and evaluated. It is thus recommended that all research administrators and managers work to maintain a solid understanding of the growing “body of knowledge” — the lingua franca if you will — that has come into print over the years.1

Perspectives on Research Administration

In support of the above, there are a number of national and international perspectives or views of research administration, and works by Johnson (1997), Nybacka-Willner (1997), and Zimmerman, Mackler, and Pe’er (2002), to name just a few, demonstrate how similar the experiences, visions, and practices are among research administrators and managers at sponsored research offices around the world. Familiarity with such writings can help us appreciate the professional environment research administrators globally share.² However, as a South African colleague once remarked: “Not everything in our work as research administrators is or even should be the same from culture to culture, and that is precisely what makes international research administration and management so interesting.”

In many respects the professional research administrator, whether she or he works in the international domain or in any of the other functional areas common to offices of sponsored programs, is best viewed by what in French is described as a bricoleur (Levi-Strauss, 1966; Denzin and Lincoln, 1994). Though a simple definition is somewhat lost in translation, the international research administrator-as-bricoleur is someone — generally comfortable in the domains of self-directed learning, collaborative aptitude, reflective practice, and noteworthy experience — who is proficient at performing diverse tasks and working betwixt and between convergent perspectives, paradigms, and experiences. With this perspective, international research administration can be viewed as a globally comparable profession united by a variety of practices, applied solutions, and meaningful goals.

¶3505.3 Most Valuable Pathway: Developing Learning and Professional Development Strategies

Beth Mora’s chapter on “Organizational Models” contains valuable information on office structures and purposeful roles and responsibilities; it also includes a good discussion of the range of skill sets needed for sponsored programs professionals (see ¶305). It is wise for the modern-day OSP also to have a cadre of staff with discerning, professional interests in international research administration.

² Professional, organizational, and functional similarities also resonate in such widely read works as E.C. Kulakowski and L.U. Chronister, eds., Research Administration and Management (Sudbury, MA: Jones and Bartlett Publishers, 2006); K.L. Beasley, M.R. Dingerson, O.D. Hensley, L.G. Hess, and J.A. Rodman, The Administration of Sponsored Programs (San Francisco: Jossey-Bass, 1982); R.J. Woodrow, Management for Research in U.S. Universities (Washington, D.C.: National Association of College and University Business Officers, 1978); and J.D. Sites in Kulakowski and Chronister, eds., Research Administration and Management (Sudbury, MA: Jones and Bartlett Publishers, 2006). Likewise, electronic “site visits” to many organizations and associations that service the international research administration community — such as those included in the international resources section at the end of this chapter — will provide further perspectives and similarities.
Since this chapter is being written with both American and non-American audiences from institutions of various sizes in mind, it is understood that not every sponsored programs office will have the requisite financial resources to send staff to international professional conferences and workshops entailing costly travel, accommodation, and per diem expenses. Given this limitation, the authors have spent a considerable amount of time speaking with colleagues from around the world about ways to develop learning and professional development strategies that would attract and retain the interest of colleagues and simultaneously satisfy differing levels of institutionally-financial support for training, education, and professional development. Outlined below are several such strategies for making professional development interesting and relevant for today’s professional research administrators keen to develop their skill sets in the area of international research administration.

The first step in developing optimal learning and professional development strategies is for senior institutional leaders to recognize that learning among adult professionals — and especially among research administrators — largely takes place through formal, informal, and incidental learning experiences. Among the best discussions of these three types of learning is that offered by Marsick and Watkins (1990; 2001) as follows:

Formal learning is typically institutionally sponsored, classroom-based, and highly structured. Informal learning, a category that includes incidental learning, may occur in institutions, but it is not typically classroom-based or highly structured, and control of learning rests primarily in the hands of the learner. Incidental learning is defined as a byproduct of some other activity, such as task accomplishment, interpersonal interaction, sensing the organizational culture, trial-and-error experimentation, or even formal learning. Informal learning can be deliberately encouraged by an organization or it can take place despite an environment not highly conducive to learning. Incidental learning, on the other hand, is almost always taking place, although people are not always conscious of it. (p. 12, 1990; p. 25, 2001)
Creating a substantive role and meaningful place for institutional learning, “andragogy,” and knowledge management are not new, and are of enormous value to forward-looking managers in search of ways to help shape collaborative learning environments that support a full range of formal, informal, and collaborative learning strategies.

Most Valuable Learning: Knowledge-Based Resources

There are four important avenues available to the research administrator-as-bricoleur in search of training, education, and professional development opportunities in the area of international collaborations.

U.S. and International Associations

First, many formal learning opportunities are available through international-based associations for research administrators, such as the National Council of University Research Administrators (NCURA), the Society of Research Administrators (SRA), the Canadian Association of University Research Administrators (CAURA), the European Association of Research Managers and Administrators (EARMA), the Australian Research Management Society (ARMS), the Swiss Association of Research Managers and Administrators (SARMA), and the Southern African Research and Innovation Management Association (SARIMA). (For contact information for these organizations, see Figure 3, page 3505:19.)

EARMA, for example, offers a range of professional development opportunities throughout Europe, such as workshops on Intellectual Property Rights and Contract Management and a training course on Advanced International Project Management. Likewise, EARMA has adopted a set of guidelines for effective training (www.earma.org/files/Training_Guidelines_Feb05.pdf) — and broadly endorses courses, workshops and events organized by other organizations such as Bluebell Research (www.bluebellres.co.uk/), Hyperion, Ltd (www.hyperion.ie); Forschungszentrum Karlsruhe and its

3 The concept of “andragogy” can easily be summarized in four general postulates: (1) adults should be involved, as much as possible, in the planning and evaluation of their instruction and learning; (2) experiences (both positive and disappointing) provide an optimal basis for learning activity; (3) adults are generally most interested in learning about subjects/topics/processes that have immediate and direct relevance to their work or personal life; and (4) adult learning is generally more “problem-centered” than “content-oriented,” though each concept should complement the other whenever possible. Additional information about this timely and fascinating theme can be found via the following sources: M.S. Knowles, The Modern Practice of Adult Education: From Pedagogy to Andragogy (Englewood Cliffs, NJ: Cambridge Adult Education, 1980); M.S. Knowles, Andragogy in Action (San Francisco: Jossey-Bass, 1984); S.B. Merriam, “Andragogy and Self-Directed Learning: Pillars of Adult Learning Theory” in S.B. Merriam, ed., “The ‘New’ Update on Adult Learning Theory,” New Directions for Higher Education, No. 89 (Spring 2001): 3-13.

4 See for example works by Knowles (1980; 1984); Brookfield (1985); Davenport and Prusak (1997); Merriam and Brockett (1997); Hansen, Nohria, and Tierney (1999); Merriam (2001); Yorks and Kasl (2002); Wlodkowski and Kasworm (2003); and Kezar (2005).
highly regarded Center for Advanced Technological and Environmental Training (http://fortbildung.fzk.de/Englisch/Index_e.html), and Yellow Research (www.yellowresearch.nl/index_yr.php).

Likewise, NCURA has several “traveling” workshops and seminars such as the “Export Controls and Embargoes Seminar.” Throughout the year, NCURA also offers special topical conferences, including those addressing topics relevant to international research collaborations. NCURA has created a range of online communities (known as “neighborhoods”) with topic-specific listservs and a range of other online offerings and video workshops. NCURA also offers a variety of publications. For details on NCURA publications and ever-expanding professional development offerings, see www.ncura.edu.

**Online Resources**

The second avenue for obtaining information on international collaborations involves a more self-directed approach, and calls for regular examination and professional understanding of international resources, essentially online materials available from organizations and associations that service the community of international research administrators. Figure 3, page 3505:19, includes an annotated listing of websites that is perhaps one of the most comprehensive resources of its kind available to research administrators to date, and much can be learned from making regular site visits to these globally based resources. For example, an electronic site visit to EUROPA — the European Union’s portal website (http://europa.eu.int/) — contains information made available by the institutions and bodies of the European Union (EU), including the European Parliament, the Council of the Union, the Commission, the Court of Justice, the Court of Auditors, the Economic and Social Committee, the Committee of the Regions, the European Central Bank, and the European Investment Bank. EUROPA also provides a vast array of information on European integration, particularly concerning the European Union’s objectives, policies, and emerging “Frameworks.”

The EUROPA site (http://europa.eu/geninfo/info/guide/index_en.htm#term) further maintains 20 separate public glossaries that contain over a thousand terms relating to European integration and the institutions and activities of the European Union. International glossaries are particularly useful, especially when the meanings and nuances of terms and phrases can differ in translation. Indeed, these glossaries are another example of the vast cache of resources available to international research administrators via the Web.

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5 For example, the European Union’s “Sixth Framework Programme covers (EU) community activities in the field of research, technology, and development and demonstration for the period 2002-2006. For more information, please see: http://ec.europa.eu/research/fp6/pdf/ fp6-in-brief_en.pdf.
In-House Libraries

The third avenue research administrators can use for obtaining information on international collaborations encompasses development of an office library of books, articles, White Papers, documents, and pertinent government and nongovernmental items available in print. For example, no sponsored research administrator’s international library would be complete without copies of two articles by John B. Richey: “Crafting Contracts for International Projects” (1993) and “Budgeting for International Projects: In-Country Operations and Long-Term Residential Assignments” (1994). Though both articles are today somewhat dated and originally intended to draw attention to issues related to projects in newly industrializing and so-called less-developed nations — and often involving long-term residential assignments — Richey’s complementary works nevertheless provide a worthy conceptual framework through which research administrators can view and assess the terms and conditions of international contractual agreements. For example, Richey’s article contains a comprehensive, though as Richey correctly notes “not exhaustive” checklist against which research administrators can review and appraise contracts and international projects.

Research administrators wishing to enhance their skills for drafting, negotiating, and administering international agreements should become familiar with the thinking included in several chapters of the Guide, including Erickson and Tangredi-Hannon’s chapter on “Research Compliance,” Mayo’s work on “Administering Research Contracts,” Irwin’s contribution on “Legal Considerations,” and Killoren’s piece on “Subawards.” (See ¶1505, ¶2705, ¶2905, and ¶3705, respectively). These works — when considered individually and collectively — provide rich insight for the research administrator wishing to extend her or his domestic expertise in the international domain. Similar themes to those noted above, written by American and non-American experts in the field, are readily available in print or by electronically visiting organizations and associations included in the International Resources section at the end of this chapter.6 (See Figure 3, page 3505:19.)

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6 One example of other works in print would include relevant sections and chapters in a variety of publications such as the section on “Research in the International Setting” in NACUA’s Legal Issues in Sponsored Programs: From Contracting to Compliance (2005) (www.nacua.org), that includes key chapters on “Export Control Regulations and Participation by Foreign Nationals” (James K. Kearney), “Fundamental Research and the International Traffic in Arms Regulations” (Rachel Claus), “Export Controls Compliance Programs: How Colleges and Universities Can Cope with the Complexity, Comply and Foster the Best Research and Teaching” (Jamie Lewis Keith), “Revision and Clarification of Deemed Export Related Regulatory Requirements” (U.S. Department of Commerce), and “Creative Structures for International and Joint Research and Education Transactions: The Sublimely Simple to the Unavoidably Complex” (Jamie Lewis Keith, et al.). One example of a very useful online resource is Restrictions on Research Awards: Troublesome Clauses, A Report of the AAU/COGR Taskforce, by Julie T. Norris, that is available from the Association of American Universities (www.aau.edu) or the Council on Governmental Relations (www.cogr.edu). See also works previously cited in footnotes 1 and 2, as well as those included in Figure 2: Selected Bibliography.
Collection of Contracts and Agreements. Consonant with the above it is also recommended that such in-house “international libraries” contain an ongoing collection of international contracts and research agreements — whenever possible maintaining copies in both the host language and in English — so that research administrators can, if linguistic abilities permit or translation services are available, check agreements for contextual and translational accuracy. For example, one of the authors was once asked to review an international contract (translated into English by the host nation), and being familiar with the host language decided to also read it in the original for linguistic, contextual, and contractual accuracies. The translation was quite good, but in one critical instance involving the appointment of a neutral arbitrator to resolve contractual disputes, the host-country’s translation used the word “possibility” when the author would have used the word “opportunity” given the particular context in which it was used; clearly, the two concepts are different and should be used appropriately. The author contacted the host institution, and after a proportionally appropriate amount of time was spent negotiating linguistic nuance (with potentially legal implications), at the author’s insistence the wording was changed in a way that outlined an actual process (and not the “possibility” or “opportunity”) for appointing a mutually agreeable arbitrator.

This example should not be unfamiliar to the experienced contract negotiator with domestic and/or international experience. The point here is simple: linguistic differences, as well as possible variations in a translator’s style and vocabulary, can potentially result in nonlegal misunderstandings or formal legal disputes. In the above case, the author reconciled a translational variance to improve a contractual agreement in a way that (hopefully) would avoid a potential legal dispute.

Budget Template. It is helpful to develop a budget template that is effective for focusing the attention of domestic and international collaborators on drafting budgetary parameters all parties can agree upon, operate within, and enhance trust by utilizing. To begin developing a template at your institution, it is recommended — after reading John Richey’s two articles — that colleagues work collaboratively to develop such a template. (See Figure 2, page 3505:17.) Whenever possible, such tools should be initially developed “in house” so as to identify particular institutional concerns.

Northwestern University’s Operating Guidelines for International Sponsored Activities is an effective resource for those institutions looking for examples of applicable policies and operational guidelines for guiding their (“in-house”) thinking. (See Figure 1, page 3505:15.) Such tools — intentionally developed to get the job done effectively and with minimal confusion to all parties — can be invaluable resources that facilitate discussion, collaboration, and agreement.

Networking with Colleagues

The fourth and final avenue for obtaining information on international collaborations addresses the cultivation of an international network of fellow professional research administrators who can provide invaluable perspectives and experientially based opinions on a variety of international themes. For example, over the years the authors
have developed meaningful friendships with research administrators from a variety of
nations, and correspondence regularly is exchanged concerning contractual language,
training and education programs, regulatory and compliance matters, and national and
transnational research trends that could impact the conduct of international research
administration.

Getting “connected” is easier than one might expect. For example, NCURA main-
tains an international listserv via its international neighborhood website
(www.ncura.edu/members/Neighborhoods). It is highly recommended that anyone
interested in communicating and exchanging information, perspectives, and “best
practices” with domestic and international colleagues sign-up for this professional
service. Similar tools for connecting with international colleagues are available through
the organizations listed in the International Resources section of this chapter. (See
Figure 3, page 3505:19.)

**Example**

On one such research administration listserv, there has been a recent
discussion regarding the hiring of an international post-doc on a spon-
sored project and visa requests. In this instance the PI wanted to charge
the $1,000 expedited visa processing fee to the project. The American
research administrator was concerned that this was not a reasonable
charge for the project to bear. E-conversations ensued and advice was
shared about visa processing — and why expedited processing may
sometimes be necessary and appropriate.

In instances when the visa application cannot allow the more than three months
processing time for regular approval now required by the government, expedited
processing fees (called Premium Processing), while considerable, allow processing in a
matter of weeks instead of months. If the timing is critical to the grant, then it could be
deemed a reasonable and allowable expense. Further information can be found at the
The visa processing time in a region may provide a justification for charging the addi-
tional fee to the grant.

It was recommended that an internal memo to the grant file be added to protect the
institution in the event of an audit.

Such timely and accessible discussion as included in the example above provides
the community of research administrators with sage advice, critical information, and
sound policy resources.

As our research environment continues to expand globally, international partner-
ships become more the norm than the exception. As such, it becomes critical for spon-
sored projects offices to have staff skilled and informed not only in the business and
nuances of international research administration such as rules, regulations, policies,
and procedures, but also in the cultural sensitivities that impact the negotiations and
details of an award. Providing adequate, accessible resources and training to research
administrators — along with opportunities for dialogue with international colleagues
— expedite and enrich the collaborative efforts of all stakeholders. In an environment of limited budgets, it is important that “management” understand the value of committing resources required by research administrators to develop and maintain those complex skills sets demanded by international research administration.

13505.5 Special Themes and Issues

Based upon conversations with American and international research administrators, a number of special themes emerge that today appear to be of importance when thinking about successful international collaborations. Rather than focusing upon specific in-depth topical discussions, which are beyond the scope of this chapter, this section instead focuses upon thematic foci and practical recommendations.

Human Subjects Research

The first theme of import to many research administrations around the world pertains to those challenges that arise when researchers from differing international organizations are involved in research involving human participants. Not surprisingly, the most commonly asked question that arises in this context is: Which nation’s legislation, regulations, or guidelines have precedence when collaborative research involves human subjects?

To answer this question, among the first places to consult is the International Compilation of Human Subject Research Protections developed by the U.S. Department of Health and Human Services Office for Human Research Protections. This exceptional resource — developed specifically for Institutional Review Boards (IRBs), ethics committees, researchers, funding agencies, and indeed anyone involved in international research — lists those countries for which laws, regulations, and guidelines relevant to human subjects research could be identified. The Compilation organizes information according to four categories:

1. **Key organizations** — including those groups that issue regulations or guidelines, or serve in a national oversight role for human subjects research

2. **Legislation** — including statutes, statutory instruments, legislative decrees, and constitutional provisions, if any, that relate to human subject protections

3. **Regulations** — meaning instruments that are created and issued under the name of governmental administrative bodies

4. **Guidelines** — meaning nonbinding instruments

Likewise, the 2008 edition of the Compilation listings cover 84 countries organized into six regions:

1. Africa

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7 Institutional Review Boards can also be referred to as Committees for the Protection of Human Subjects, Committees for the Protection of Human Participants in Research, Research Ethics Boards, Research Ethics Committees, and Ethics Research Committees.
(2) Asia/Pacific/Middle East;
(3) Europe;
(4) International;
(5) Latin America/Caribbean; and
(6) North America.

Accessible online (www.hhs.gov/ohrp/international/HSPCompilation.pdf), the Compilation in effect identifies (with Internet links) an international grid of legislation, regulations, and guidelines, all of which share a common concern for modern research ethics in support of human dignity.8

Monitoring International Collaborations

The second theme that generates the most questions, especially from American research administrators (but increasingly from colleagues in Europe as well) pertains to the monitoring of international projects. In sum, the question is: How can foreign entities be appropriately monitored?

The current literature on monitoring foreign projects is not particularly strong, and this may indeed be because American-based institutions regularly define an “international project” as one sponsored by a foreign government, or perhaps by a private entity based in another country, irrespective of where the research/work is to be performed.

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8 See for example NIH’s website entitled “Bioethics Resources on the Web,” http://bioethics.od.nih.gov/international/bioethics.html#guidelines, which includes links to (1) International Ethical Guidelines, Codes, and Declarations; (2) Educational Resources on International Research Ethics; (3) International Organizations; (4) International Bioethics Journals; (5) Tutorials, Case Studies, and Courses; (6) Short Educational and Training Courses; (7) Academic Centers and Programs; and (8) Educational Sites and Resources. Likewise, the Fogarty International Center — in partnership with several NIH institutes and a variety of federal centers and agencies — “supports domestic and international educational and research institutions to develop or expand current graduate curricula and training opportunities in international bioethics related to performing research on acute and chronic diseases in low- and middle-income nations.” For a full overview, see www.fic.nih.gov/programs/training_grants/bioethics/index.htm.

Similar online resources are available for research involving animals. Recommended resources include (1) the Swedish Research Council’s gateway to various research ethics guidelines — called CODEX (www.codex.vr.se/codex_eng/codex_eng.html) — that is run in collaboration with The Centre for Bioethics at Karolinska Institutet and Uppsala University; (2) the European Convention for the Protection of Vertebrate Animals Used for Experimental and other Scientific Purposes (www.codex.vr.se/codex_eng/codex_eng.html); (3) the European Consensus-Platform for Alternatives (www.ecopa.eu); (4) The Johns Hopkins Center for Alternatives to Animal Testing (http://caat.jhsph.edu/); and (5) the International Society for Applied Ethology’s Guidelines for Ethical Treatment of Animals in Applied Animal Behavior and Welfare Research (www.applied-ethology.org/index.htm).
When a group of veteran international research administrators from a variety of countries (including the United States, Canada, and nations in Africa, Asia, and Europe) were polled, the majority cited The International Development Research Centre (IDRC) as the primary online site (www.idrc.ca/en/ev-57172-201-1-DO_TOPIC.html) they consult, in the first instance, for information involving monitoring international entities and research agreements. The IDRC site is recommended as an easy-to-use and relatively trustworthy resource on monitoring.

In brief, IDRC’s “Grant Monitoring” site contains useful sections on
• Tracking
• Administration and funding
• Project reporting/reports
• Guidelines for preparing interim and final technical reports
• Financial reporting
• Audit considerations
• Feedback to recipients

The IDRC site also contains useful “checklists” (1) for monitoring and evaluating projects; (2) for evaluating incoming financial reports; and (3) for developing financial reports.

Evolving Issues. The special themes research administrators involved in international collaborations are faced with today will no doubt continue to evolve — and more issues and concerns will emerge. As research administrators become more sophisticated in this arena, and as partnerships mature, the possibility of shared resources will become a reality. Looking to the future, the global need of research administrators — such as for measuring OSP performance, accessing data and generating reports, responding to policy questions and interpreting rules and regulations vis-à-vis international projects — will be a driver for multinational research administration collaborations. As a result, research administrators will be in a better position to inform themselves and others, thereby contributing to the body of knowledge that many hope emerges into a culture of international research administration.

¶3505.6 Conclusion

This chapter presents an overview of methods offices of sponsored programs can use to develop effective strategies, practices, and resources in support of successful international collaborations. The complexities of international research administration can be challenging, and depending on the structure and staffing of these offices for sponsored programs, the burden can vary based upon the size and knowledge base of personnel. The current and anticipated increase in the complexity of the regulatory environment will only add further demands on these projects and staff. Coping with this will require
more strategies, efficiencies and mechanisms for sharing best practices within and among institutions.

**Importance of Communication**

Communication becomes one of the critical keys to a successful partnership and in spite of differing languages and cultural expectations this can be effectively accomplished. As noted in Kim Moreland’s chapter on “Communications in Research Administration,” communication skills require effort but the results can be profound (see ¶505). International communication skills are also a contributing factor to success, and these skills can be cultivated, regardless of language and cross-cultural differences. Here too the results can be profound.

Indeed, as international projects continue to become more commonplace, it is essential that research administrators and managers understand and be conversant in the issues affecting international grants and contracts. Even so, lying just beyond the rules, regulations, procedures, and policies is a need for cultural sensitivities and open communication among all parties — essentially allowing the research administrator the opportunity to play the role of the international envoy.
Recognizing Northwestern’s growing interest in international projects and the importance of such projects for achieving institutional goals, yet needing to respond to the complex issues that arise, new policies and guiding principles have been devised. For purposes of this policy statement, an international project is one that is sponsored by a foreign government or by a private entity based in a foreign nation, irrespective of where the work is to be performed.

As it does for other sponsored projects, the Office for Sponsored Research (OSR) serves as the point of contact for faculty interested in submitting a proposal to an international sponsor. OSR’s initial role is to determine the feasibility of moving ahead with proposal development. Risk Management, the Office of General Counsel, the Controller, and other University offices may be asked to participate in this process. Sufficient time should be provided to allow for the necessary internal analysis. OSR should be provided with a rationale for the activity and a budget outline.

OSR will then prepare a project assessment for the Vice President for Research. The Vice President may gather such other information as is deemed relevant to protect the originating unit, individual interests, or the University. Once approved, the proposal will be processed through OSR in accordance with established procedures and should include the written endorsement of the chairperson and dean or center director on the OSR-1 form, Statement of Commitments and Endorsement of a Proposal for a Sponsored Project. OSR will provide guidance on the preparation of the budget. The nonfederal indirect cost rate should be used. If an off-campus component is contemplated, the budget should clearly identify the on- and off-campus costs, and the correct indirect cost rate should be applied to each. If it emerges that a foreign sponsor declines to pay full overhead on this basis, any shortfall should normally be included as a direct cost to the sponsor in the form of rent, services, or project administration and will be recovered internally in the same manner as indirect cost. An authorized institutional signature by a designated OSR official or the Vice President for Research must be obtained before the proposal is submitted to the sponsor.

OSR is the only institutional office authorized to negotiate with the foreign sponsor on behalf of the University. The following terms will be included in agreements with foreign sponsors:

◆ English is the operative language.
◆ Payment is in U.S. dollars by wire transfer or by check drawn against a US bank or foreign bank with a US branch.
◆ An escrow deposit and/or advance payments, equal to no less than the anticipated quarterly expenses, are required.
◆ Invoicing instructions specifying the form, content, and required timing of invoice submission must be stated, along with sponsor contact and transmission instructions.
◆ Financial reporting requirements and fund reversion conditions must be identified.
◆ Language must allow for early termination by Northwestern and assure payment of actual expenses and noncancellable commitments through the date of termination.
◆ Dispute resolution should be by arbitration through the International Chamber of Commerce.

When an international agreement is negotiated successfully, a University account will be established with the following conditions:

◆ Funds will be appropriated to individual accounts as payments are received and have “cleared” the bank.

continued
Figure 1: Sample Operating Guidelines for International Sponsored Activities (continued)

◆ When available funds are insufficient to cover expenses and commitments, the account will be deactivated pending receipt of additional funds from the sponsor or a departmental or a valid center guarantee.

◆ The Office of Accounting Services for Research and Sponsored Programs (ASRSP) is responsible for invoicing in accordance with the payment schedule designated in the agreement. When possible, invoices will be faxed to the sponsor. Originals will follow, via express mail. ASRSP will notify the project director if delays or other problems are encountered in the invoicing/payment process. Where the project expenditures exceed awarded amounts, the University’s Policy on Fiscal Responsibility for Projects Sponsored by Industry and Business will govern the resolution of any overdraft condition.

Proposals involving projects to be completed outside the United States should be developed with a clear understanding of the cultural setting of the country in which the project is to be undertaken. Because the financial and legal exposures in undertaking international projects may be significant, OSR will make every effort to assist the project director in understanding and reducing the financial and other risks that may be identified.

Figure 2: Selected Bibliography


continued
Figure 2: Selected Bibliography (continued)


Academia Sinica, the most preeminent academic institution in the Republic of China, was founded in 1928 to promote scholarly research in China and to undertake academic research in the sciences and humanities. After the government moved to Taiwan in 1949, Academia Sinica was re-established in Taipei. The growth of Academia Sinica during the transition period was slow due to political instability and meager budgets.

In recent years, under the leadership of President Yuan T. Lee, Academia Sinica has been transformed into a modern research institute. Many of the 24 research institutes and 6 research centers are now headed by world-class scholars and staffed by highly-trained, motivated, and creative young researchers. Major strides have also been made toward raising the standards of academic research, and Academia Sinica is presently positioning itself to move its research activities to the international level. Aside from placing greater emphasis on opening up new areas of intellectual endeavors, Academia Sinica is also taking a leading role in the launch of new initiatives in applied areas to meet a broad spectrum of societal needs within Taiwan.

Towards fulfilling these goals, Academia Sinica has adopted various measures to promote internal integration of research activities in the three research disciplines — mathematics and physical sciences; life sciences; and the humanities and social sciences — to help with the planning, implementation, and evaluation of long-term projects in order to enhance the impact of research activities; to deploy basic research results in applications and technology transfers; to engage the academic and research community within Taiwan toward a modern, forward-looking and collective academic vision; to cultivate an intellectual environment that is conducive to the nurturing of young scholars and the recognition of outstanding scholarship in Taiwan; and to promote international cooperation and scholarly exchanges that will accelerate the overall development of academic research in Academia Sinica and the Republic of China.

Academy of Science of South Africa (ASSAF)
(South Africa)
www.assaf.co.za

Like democratic South Africa in general, ASSAF aspires to play both a national and an international role, particularly with respect to the African continent. ASSAF views the Academy as usefully at arms length from Government and other organised sections of the state, comprising an assembly of excellent scholars from many disciplines who are well-networked both nationally and internationally, and have shown their interest in and capacity for promoting the development of a prosperous and a fully enabled society. Membership of the Academy (by election) is both an honour and an obligation to work individually and collectively (as the Academy) to ensure that decision making requiring scholarly scrutiny and analysis is based on the best and most integrated understandings and insights available to the country. The Academicians thus represent an organised, independent but responsive scholarly voice to help guide the development of the country and its people.

The mission of ASSAF is to (1) become increasingly associated in the mind of the nation with the highest levels of scholarly achievement and excellence in the application of scientific thinking for the benefit of society; (2) consolidate its infrastructure and capacity, and to expand and mobilise the
membership to ensure that scholars from a full disciplinary spectrum are available for its work, and that these are indeed both thinkers and doers, willing to put significant effort into the Academy’s activities; (3) embark on a programme of systematic studies of evidence-based issues of national importance, some proposed by government or other sectors, and some identified by the Academy itself; (4) develop a sound and robust methodology for constituting study panels, organising their work, including conferences and workshops, and producing authoritative reports that are well-disseminated and have significant impact; (5) publish science-focused periodicals, especially a multidisciplinary journal of high quality (the South African Journal of Science) and a science magazine that will showcase the best of South African research to a wide national (and international) audience (QUEST — Science for South Africa); and to promote the development in South Africa of an indigenous system of research journals of internationally recognised quality and usefulness; (6) develop productive partnerships with other organisations, especially (but not only) the Departments of Science and Technology, Education, Health and Agriculture; the National Advisory Council on Innovation; science councils; higher education institutions, etc., with a view to the building of capacity in science and its applications within the National System of Innovation (NSI); (7) create new and diversified sources of funding for the sustainable functioning of an independent Academy; (8) communicate effectively with the general and specific publics, as well as with partners and sponsors; (9) develop a plan for the expansion of the activities of ASSAF in partnership with the national science academies of other countries, including contracted partnership with the US National Academies; and (10) play a significant role in the international science system, particularly in Africa, through organisations such as the InterAcademy Panel (IAP) and the InterAcademy Council (IAC), the Academy of Sciences of the Developing World (TWAS), the International Council on Science (ICSU), as well as the Network of African Science Academies (NASAC), all in the context of the New Partnership for Africa’s Development (NEPAD).

Academy of Sciences of the Islamic Republic of Iran
(Iran)
www.interacademies.net/CMS/2950/4251.aspx
The Supreme Council of Cultural Revolution sanctioned the establishment of the Academy of Sciences of the Islamic Republic of Iran in 1987. The main bodies of the Academy are: president of the Islamic Republic of Iran in his capacity as the presidency, general body, president of the Academy, scientific council and secretary of the Academy. The Academy has three types of members: fellows, associates and honorary. At present, the academy has 38 fellows, 74 associates and 3 honorary members.

Asia Pacific Research Online
(Asia – Pacific)
www.ciolek.com/
Online research and publications about Asia’s traditional and modern communication networks, and religions. The site, with over 50,000 visitors each month, is designed for swift access to data, and for good transmission speed and interoperability, not for fancy looks. Also, see the page about www.ciolek.com.

Association of African Universities
(Africa)
www.aau.org
The Association of African Universities (AAU) is an international non-governmental organisation set up by the universities in Africa to promote cooperation among themselves and between them and the international Academic community. The AAU, whose headquarters is in Accra, Ghana, was formed in November 1967 at a founding conference in Rabat, Morocco, attended by representatives of 34 universities who adopted the constitution of the Association. This followed earlier consultations
Figure 3: Selected Resources (continued)


Association of Universities and Colleges of Canada / Association des universités et collèges du Canada
(Canada)
www.aucc.ca

The Association of Universities and Colleges of Canada (AUCC) is the voice of Canada’s universities, and represents 90 Canadian public and private not-for-profit universities and university-degree level colleges. Since 1911, AUCC has provided strong and effective representation for its members, in Canada and abroad. AUCC’s mandate is to facilitate the development of public policy on higher education and to encourage cooperation among universities and governments, industry, communities, and institutions in other countries. AUCC provides services to member universities in three main areas: (1) public policy and advocacy; (2) communications, research and information-sharing; and (3) scholarships and international programs.

Association of Commonwealth Universities
(United Kingdom – International)
www.acu.ac.uk

The Association of Commonwealth Universities (ACU) is a global network of outstanding human and scientific resources that serves its member institutions by advancing international co-operation and understanding in higher education, and by providing a broad range of services and facilities. Membership comprises nearly 500 universities drawn from the Commonwealth countries of Africa and Asia, Australasia and the South Pacific, Canada and the Caribbean, the United Kingdom, Cyprus and Malta. These institutions come together voluntarily under the umbrella of the ACU to build on their historical links, shared traditions and common purposes in order to further international understanding and collaboration.

Association of European Science and Technology Transfer Professionals
(Europe)
www.astp.net

With the field of technology transfer growing rapidly, European Professionals in Transfer of Science & Technology have had an increasing need for a platform to meet and share experiences on a regular basis. The initiative of a multinational group of professionals resulted in the establishment of the non-profit Association of European Science & Technology Transfer Professionals on 31 December 1999. The mission of ASTP is to professionalise and promote technology and knowledge transfer between the European science base and industry. The Association is growing rapidly, and within five years has welcomed more than 500 members, covering 35 countries.

Association of Independent Research Institutes
(United States)
www.airi.org

The Association of Independent Research Institutes (AIRI) is a nationwide association of independent, not-for-profit research institutes conducting peer-reviewed basic and applied research in the biomedical and behavioral sciences.

continued
Figure 3: Selected Resources (continued)

Association of Research Managers and Administrators UK
(United Kingdom)
www.arma.ac.uk

ARMA is the professional association for research managers and administrators in the United Kingdom (UK). ARMA members work in a variety of organisations, including universities, funding bodies, the NHS and independent research organisations, as well as organisations providing services to research support offices. ARMA activities are focused on encouraging professional development and networking amongst research managers and administrators. To keep members up to date with developments in the field, ARMA provides a series of training and information events, including an annual Spring Conference, a series of one-day seminars, a structured programme of training courses, and short Study Tours. ARMA also support the exchange of knowledge and best practice through focused Discussion Groups and a number of email lists. ARMA publish a series of Occasional Papers to which members are encouraged to contribute and offer a small number of bursaries to support individual professional development activities. ARMA also collaborates actively with peer associations overseas.

Association of University Technology Managers
(United States)
www.autm.net/index.cfm

AUTM’s global network of members represent more than 350 universities, research institutions, teaching hospitals and government agencies as well as hundreds of companies involved with managing and licensing innovations derived from academic and nonprofit research. The association was founded in 1974 as the Society of University Patent Administrators with the objective of addressing a concern that inventions funded by the U.S. government were not being commercialized effectively. Through the years AUTM has grown beyond this single objective and now provides professional development and networking opportunities for technology transfer professionals at all career levels and from established and newly forming organizations worldwide. AUTM provides numerous resources for members including survey reports, professional development courses, a comprehensive training manual, peer-reviewed journal and a worldwide community of peers with expertise in all areas of intellectual property management.

Australian Academy of Science
(Australia)
www.science.org.au

The Academy was founded in 1954 by Australian Fellows of the Royal Society of London, and was granted a Royal Charter establishing the Academy as an independent body but with government endorsement. The Academy’s Constitution was modeled on that of the Royal Society of London. It receives government grants towards its activities but has no statutory obligation to government. The objectives of the Academy are to promote science through a range of activities. It has defined four major program areas: (1) recognition of outstanding contributions to science; (2) education and public awareness; (3) science policy; and (5) international relations.

Australian Research Council
(Australia)
www.arc.gov.au/default.htm

The Australian Research Council (ARC) plays a key role in the Australian Government’s investment in the future prosperity and well-being of the Australian community. ARC’s mission is to advance Australia’s capacity to undertake quality research that brings economic, social and cultural benefit to the Australian community. Likewise, ARC fosters excellence, partnerships and the highest ethical standards in research and research training in all fields of science, social sciences and the humanities.
ARMS is a professional association for research managers and administrators designed to enhance and build the networks of research professionals across the research enterprise spectrum, as well as to exchange knowledge and expertise on issues to do with the management and commercialisation of research. Currently ARMS has over 540 registered members under corporate or individual membership categories.

ARMS has grown significantly from its beginnings in 1999 and is now moving towards a partially supported professional society. The ARMS Executive volunteer their time with part-time support of a small secretariat. Primary activities centre on an annual conference, specialist interest workshops, and training and information events organised through local Chapters. ARMS also has a regular newsletter entitled “Up in ARMS” and e-newsletter updates to keep membership informed.

ARMS is dedicated to the professional development of members and currently offers travel grants to support middle-level research managers to participate in an appropriate national or international research management activity or study tour. ARMS also encourages and supports formal mentoring relationships through a mentoring scheme. ARMS is a member of the International Network of Research Management Societies (INORMS), and collaborates actively with sister societies overseas.

Bangladesh Academy of Sciences
(Bangladesh)

www.interacademies.net/CMS/2950/4262.aspx

The Bangladesh Academy of Sciences, established in 1973, is a national, non-governmental organization, recognized and financially supported by the government and considered as the apex body in science and technology in Bangladesh. Fellows, eminent for their original contribution to science and technology, are elected by the Academy. There are currently 58 fellows. The main objective of the Academy is to enhance science and technology in Bangladesh. In this context the Academy recognizes and promotes high caliber scientific research done by scientists, facilitates their mutual contacts, strengthens scientific and technological work and fosters it for social and economic development for the welfare of the people. The Academy also advises the government on scientific and technological matters of vital national interest. The Academy has established links with leading science academies worldwide, and was a founding member of the Federation of Asian Scientific Academies and Societies (FASAS) in 1984. The Academy also became a National Associate of ICSU in 1986.

Bolivian National Academy of Sciences – academia nacional de ciencias de bolivia
(Bolivia)

www.aciencias.org.bo

The National Academy of Sciences, founded in 1960, is a public self-governing autonomous learned society established under a presidential decree. Its mission is to create an appropriate environment for the development of science, technology and innovation in the country. Its present by-laws allow for 56 members, of which at present 53 are appointed. The Academy encourages scientific research by supporting members of the scientific community of Bolivia and carries out research activities and studies through its own institutes, at present: the Energy Institute, the National Astronomical Observatory, the National Museum of Natural History, the Biomedical Institute, the Centre for the Conservation and Sustainable use of Biodiversity and the Centre for the Study of Science, Technology and Innovation.
Figure 3: Selected Resources (continued)

The Academy also acts as an advisory body to government and the private sector, hosting conferences, meetings and lectures. At the same time it promotes public understanding of science through intensive policy dialogues.

**Brazilian Academy of Sciences (ABC)**
(Brazil)

www.abc.org.br/english/index.asp

The Brazilian Academy of Science was founded on May 3rd, 1916, in Rio de Janeiro, as the Brazilian Science Society. In 1921 the name was changed to the one in use today. The Academy focuses on promotion of high scientific standards and the advancement of science and technology in Brazil, encouraging efforts to diffuse education at all levels and contributing to the social well-being of its people. The Academy currently has 536 members including 283 full members, 114 associate members and 136 corresponding members. New members are elected annually by the General Assembly. ABC is frequently requested by the Brazilian government to provide advice on policy and technical issues of interest to the country. Due to the relevance of its affairs, the government has been a major financier of the Academy’s activities, respecting the independence and autonomous character of the Academy.

**Cameroon Academy of Sciences**
(Cameroon)

www.interacademies.net/CMS/2950/4265.aspx

The Academy was founded in 1990 with the goal of promoting the progress of science and technology for the economic, social and cultural development of Cameroon. Specific objectives include promoting research and technological training at the highest level, advising the national government and other national/international policy makers on issues related to science and technology. Membership, is non-discriminatory on the basis of ethnic group or gender and are distributed among the colleges of biological sciences, social sciences and mathematical and physical sciences. Main activities include organizing conferences, seminars, workshops and lectures on issues of scientific interest, awarding prizes to young scholars and researchers, publishing the Academy Journal, contracted research projects with partners, and the awarding of scholarship grants to encourage and motivate students in the sciences.

**Canadian Association of University Research Administrators**
(Canada)

www.caura-acaru.ca

Founded in 1971, the Canadian Association of University Research Administrators is a national association of individuals committed to advancing the profession; to improving the efficiency and effectiveness of research administration at post-secondary institutions, hospitals, and other research institutes; to maintaining a strong presence and coherent voice on key issues relevant to research and to fostering co-operation and links with other organizations active in the management and administration of research.

**Centre National de la Recherche Scientifique/French National Center for Scientific Research**
(France)

www.cnrs.fr/index.html

The French National Center for Scientific Research (CNRS) is a publicly-funded research organization that defines its mission as producing knowledge and making it available to society. CNRS has 26,000 employees (among which 11,600 are researchers and 14,400 are engineers and technical and administrative staff). The CNRS budget was about 2.214 billion euros for the year 2004. CNRS maintains 1,260 service and research units spread throughout the country that cover all fields of research.
Figure 3: Selected Resources (continued)

Chinese Academy of Sciences (CAS)
(China)
www.interacademies.net/CMS/2950/4266.aspx

Founded in 1949, the Chinese Academy of Sciences is the country’s highest academic institution in natural sciences, its supreme scientific and technological advisory body, and a comprehensive national research and development center in natural sciences and advanced technology. It has 90 research institutes, one research-oriented university, and one graduate school located in 13 major cities across the country: Beijing, Shanghai, Nanjing, Hefei, Changchun, Shenyang, Wuhan, Guangzhou, Chengdu, Kunming, Xi’an, Lanzhou, Urumqi (Xinjiang) and Hainan, with more than 43,000 professional staff and 38,000 graduate students. The Academy Divisions of CAS consists of six divisions, with 702 CAS Members and 53 foreign Members.

Columbian Academy of Exact, Physical and Natural Sciences
(Columbia)
www.accefyn.org.co

The Colombian Academy of Sciences was founded in 1929, and in 1933 was recognized as a consultative body of the Colombian government. The Academy is a non-governmental organization with 3 groups of membership: corresponding, full (40 members) and honorary (7 members). It promotes scientific research, and in particular, programs oriented towards enhancing knowledge of the Colombian natural environment and its resources. The improvement of science teaching, at all levels of the Colombian educational system, is another main task. These activities are considered of the highest priority for scientific capacity building in the country. Shortly after its establishment, the Revista was published and each year, the academy delivers two prizes: “The Colombian Academy of Sciences Prize” and “Twas Prizes for Young Scientists in Colombia.”

Community Research and Development Information Service
(Europe)
www.cordis.lu/en/home.html

CORDIS is the information service that keeps you up-to-date with European Community activities and initiatives in the field of Research & Development (R&D) and Innovation. CORDIS is free of charge and offers a wide range of information about EU research and innovation policies, EU funding programmes, initiatives, potential partners, and previous and on-going projects. This service is a powerful knowledge and funding resource for both small and medium sized enterprises and big companies across Europe that wish to increase their innovative potential. CORDIS is part of the Office for Official Publications of the European Communities, the publishing house of the European Union.

Cuban Academy of Sciences
(Cuba)
www.academiaciencias.cu/English/indexen.as

The Academy of Sciences of Cuba, is an official institution of the Cuban State with a national scope, independent and consultative in the area of science, and a continuer of the former Royal Academy of Medical, Physical and Natural Sciences of Havana, founded on May 19, 1861, which is attached to the Ministry of Science, Technology and the Environment.

For the accomplishment of the objective appointed to the Academy of Science of Cuba, it shall have the following powers and functions: (1) contribute to increase the role of science within the national culture and disseminate scientific methods in the society; (2) promote technical-scientific endeavors made by the scientific community with ideas that may contribute with specialized criticisms and provide alternative prospects to the problems of science and technique at home; (3) promote recognition of outstanding scientists and outstanding teams, and disseminate and stimulate
Figure 3: Selected Resources (continued)

observation of the principles of professional ethics by scientists; (4) contribute to increase scientific and technical level of the human potential in the country, particularly in the new generations; (5) contribute to the preservation of the history, traditions and patrimony of science in the country by issuing regulations and doing actions with respect thereof and disseminating the example of Cuban scientists; (6) develop different forms for the dissemination of advances of Cuban science at home and abroad and promote introduction of the said advances into general and people’s education through coordination with different bodies and organizations and also through the improvement of plans and programs of the national system of education; (7) promote activities which shall stimulate interdisciplinary relations and impulse potentials in the territories with less development, with the participation of scientific societies; (8) promote and strengthen inter-academic links with international organizations and the counterparts in other countries; (9) promote scientific sessions for the exchange among professionals working in similar areas and analyze and evaluate the performance of the scientific policy, issuing the relevant recommendations; (10) analyze and evaluate scientific journals published at home, issuing the relevant recommendations; (11) perform as a multi-branch consultative body for the cases of any relevant technical and scientific issue, issuing the pertinent recommendations; (12) create expert teams to evaluate projects or scientific topics upon request of organizations, bodies or institutions; (13) organize debates within the frame of the scientific community to discuss on current issues and disseminate the trends of current scientific thought in the main disciplines of knowledge; and (14) organize events in coordination with different scientific societies and promote participation of Cuban scientists in contests and international awards.

Delegation of the European Commission to the USA

(Europe – USA)

www.eurunion.org/partner/euusrelations/transcorpdocs.htm

This well-maintained and informative website contains important information on — and provides vital links to — a range of EU-US agreements of direct interest to research administrators.

Deutsche Forschungsgemeinschaft/German Research Foundation

(Germany)

www.dfg.de/en/index.html

The Deutsche Forschungsgemeinschaft (German Research Foundation) is the central, self-governing research organisation that promotes research at universities and other publicly financed research institutions in Germany. The DRF serves all branches of science and the humanities by funding research projects and facilitating cooperation among researchers.

Edinburgh Research and Innovation (The University of Edinburgh)

(Scotland)

www.research-innovation.ed.ac.uk

Edinburgh Research and Innovation (ERI) seeks to promote the University of Edinburgh’s research and commercialisation activities to potential research sponsors and collaborators, licensees or investors. These activities include: (1) research programs and centres seeking sponsored/collaboration research agreements; (2) new technologies available for licensing; (3) key research centres and academic experts engaging in consultancy and knowledge transfer; (4) new spin-out or start-up companies requiring investment; (5) supporting entrepreneurs seeking access to the university’s advanced facilities and expertise; (6) incubation centres providing early stage support to new companies; and (7) locating to the University of Edinburgh science & technology park.
Figure 3: Selected Resources (continued)

European Association of Research Managers and Administrators  
(Europe)  
www.earma.org

EARMA is a not-for-profit organization with a mission to continually improve the quality of research management and administration; set high professional standards by effectively supporting its members; promote the interests of its members at all times; and influence relevant European policies by utilizing the invaluable experience of its members EARMA’s Strategic Objectives are to (1) promote the best interests of our members and influence EU policies; (2) provide coordinated Continued Professional Development (CPD) programmes for our members; (3) provide an effective system of networking and communication for our members; (4) identify, evaluate and disseminate information related to best practice in research management; (5) establish an effective and efficient organisational management infrastructure; and (6) enhance and maintain the financial stability of the association.

European Association for the Transfer of Technology, Innovation and Industrial Information  
(Europe)  
www.tii.org

The European Association for the Transfer of Technologies, Innovation and Industrial Information — or TII — is one of the longest-standing, voluntary, independent associations representing the innovation support and technology transfer professions in Europe. Its 300 members, based in some 30 countries, come from both the private and public sectors and are active in R&D exploitation, business incubation, IP negotiation, technology brokerage and licensing, prototype and new product development, technology audits and innovation management, company spin-off and start-up support. TII is a non-profit association governed by a Board of Management elected by and from the members.

European Industrial Research Management Association  
(Europe)  
www.eirma.org/f3/local_vbindex.php

The European Industrial Research Management Association (EIRMA) is an independent, not-for-profit organisation, and its aim is to enhance innovation through more effective market-oriented research and development. By being member-focused and by providing a platform for these members to discuss ideas and exchange practical experience, EIRMA stays current with the ways managers think about and address their jobs. EIRMA’s activities support companies in benchmarking and improving their innovation processes and in ensuring well-managed and well-organised research and development. These activities also establish EIRMA as a natural first point of contact for policy makers and others seeking the business community’s insight. Founded in 1966, today EIRMA has some 150 member companies. They are based in over twenty countries and they collectively fund the major proportion of business enterprise investment in R&D in Europe.

European Research Consortium for Informatics and Mathematics  
(Europe)  
www.ercim.org

The European Research Consortium for Informatics and Mathematics (ERCIM) aims to foster collaborative work within the European research community and to increase cooperation with European industry. Leading research institutes from seventeen European countries are members of ERCIM.

continued
Figure 3: Selected Resources (continued)

European Science Foundation
(Europe)
www.esf.org

The European Science Foundation (ESF) is an association of 77 member organisations devoted to scientific research in 30 European countries. Since ESF was established in 1974, it has coordinated a wide range of pan-European scientific initiatives, and its flexible organisation structure means ESF can respond quickly to new developments. In brief, ESF’s core purpose is to promote high quality science at a European level, and is committed to facilitating cooperation and collaboration in European science on behalf of its principal stakeholders (Member Organisations and Europe’s scientific community). This cross-border activity combines both “top-down” and “bottom-up” approaches in the long-term development of science. The Foundation is committed to providing scientific leadership through its networking expertise and by ensuring that there is a European added value to all of its initiatives and projects.

European Union Research
(Europe)
www.europa.eu.int/abouteuropa/faq/q01/index_en.htm

At the European Union’s portal web site — EUROPA — you will find all the information made available on the Internet by the institutions and bodies of the European Union, including the European Parliament, the Council of the Union, the Commission, the Court of Justice, the Court of Auditors, the Economic and Social Committee, the Committee of the Regions, the European Central Bank and the European Investment Bank. EUROPA provides a vast array of information on European integration, particularly concerning the European Union’s objectives, policies and institutional set-up. EUROPA is designed to be as user-friendly as possible in line with the EU institutions’ commitment to openness.

Federal Ministry of Education, Science, Research and Technology/Bundesministerium für Bildung, Wissenschaft, Forschung und Technologie
(Germany)

A source of valuable resources for information — in English or German — on efforts of Germany’s Federal Ministry of Education and Research to broaden participation in education, promote excellence and increase investments in research and development.

Georgian National Science Foundation
(Democratic Republic of Georgia)
www.eng.gnsf.ge

The Georgian National Science Foundation (GNSF) is a Public Legal Entity established by Presidential Decree # 653 in July 17, 2005 to promote the progress of science by funding state scientific grants. Governing Bodies of GNSF are represented by (1) Science Board, (2) Director, and (3) Staff. The Science Board includes scientific and public authorities; establishes the overall policies and oversees the activities, endorses the budget and the report of its implementation, distributes the scholarships, bonuses and fees; represents the results and recommendations of the activities of Foundation to the President of Georgia; publishes the detailed information of scientific and technological development. The mission of the Foundation is to allocate grants from the State Budget on the basis of open, transparent and free competitions.
Figure 3: Selected Resources (continued)

Ghana Academy of Arts and Sciences  
(*Ghana*)

[www.interacademies.net/CMS/2950/4275.aspx](http://www.interacademies.net/CMS/2950/4275.aspx)

The Ghana Academy of Arts and Sciences (GAAS) was founded in 1959 to promote the study, extension and dissemination of the arts and sciences in Ghana and honour eminent scholars through their election as fellows. The Academy, whose membership currently totals 65, publishes the J.B. Danquah Memorial lectures and Academy proceedings, organizes symposia and meetings, bestows awards on citizens for their distinguished contributions in science, technology and the arts, and maintains contact with other academies in other countries.

Guatemalan Academy of Medical, Physical and Natural Sciences - academia de ciencias medicas, fisicas y naturales de Guatemala  
(*Guatemala*)

[www.interacademies.net/CMS/2950/4237.aspx](http://www.interacademies.net/CMS/2950/4237.aspx)

The Guatemalan Academy of Medical, Physical and Natural Sciences was established in 1945 with the purpose of dissemination of cultural studies, the advancement of science, support of scientific and technological research and incorporation of universal knowledge to human progress. The Academy is a member of the National Council of Science and Technology where it defends the interest of institutions of advanced education and of individual scientists. The Academy has 80 appointed members, 32 in the medical, human and animal health area, 20 in physics, mathematics and engineering, 20 in chemistry, biology, biochemistry and pharmaceutical sciences and 4 in agronomy.

Indian Academy of Sciences  
(*India*)

[www.ias.ac.in](http://www.ias.ac.in)

The Indian Academy of Sciences, founded in 1934, aims at promoting the progress and upholding the cause of science in pure and applied branches. Major activities include publication of scientific journals and special volumes, organizing meetings of the Fellowship and discussions on important topics, recognizing scientific talent, improvement of science education and taking up other issues of concern to the scientific community.

Indian Institute of Science  
(*India*)

[www.iisc.ernet.in](http://www.iisc.ernet.in)

Founded in 1909, the Indian Institute of Science (IISc) has grown into a premier institution of research and advanced instruction, with more than 2000 active researchers working in almost all frontier areas of science and technology. IISc is an institute of higher learning and is constantly in pursuit of excellence. It is one of the oldest and finest centres of its kind in India, and has a very high international standing in the academic world as well.

Indonesian Academy of Sciences  
(*Indonesia*)

[www.interacademies.net/CMS/2950/4278.aspx](http://www.interacademies.net/CMS/2950/4278.aspx)

The Indonesian Academy of Sciences was established in 1990. At present it has 41 members, of which 9 are honorary members. The academy currently has 5 scientific committees organized as follows: Committee on Basic Sciences; Committee on Engineering; Committee on Medical Sciences; Committee on Social Sciences; and Committee on Art and Culture.
Figure 3: Selected Resources (continued)

Institute of Nanotechnology
(United Kingdom)
www.nano.org.uk/ion.htm

The Institute of Nanotechnology (originally the Centre for Nanotechnology founded by Ottilia Saxl in 1994) was one of the world’s first nanotechnology information providers, and is now recognised as a global leader. IoN works closely with governments, universities, researchers, and companies worldwide on developing and promoting all aspects of nanotechnology. It also serves as a key organizer of international scientific events, conferences, and educational courses designed to encourage nanotechnology uptake by industry, as well as stimulating interest in less developed countries.

InterAcademy Council
(International)
www.interacademycouncil.net

The InterAcademy Council (IAC) was created by the world’s science academies to mobilize the best scientists and engineers worldwide to provide high quality advice to international bodies — such as the United Nations and the World Bank — as well as to other institutions. In a world where science and technology are fundamental to many critical issues — ranging from climate change to genetically modified organisms and the crucial challenge of achieving sustainability — making wise policy decisions has become increasingly dependent on good scientific advice. IAC is client-driven and works on a project-by-project basis. It has developed mechanisms and procedures to guarantee the scientific quality of its reports, the policy-relevance of its recommendations and the absence of regional or national bias.

International Association for Management of Technology
(International)
www.iamot.org

The International Association for Management of Technology (IAMOT) offers its members association with professionals in the field. There is particularly close interaction during the annual conference. IAMOT offers its members a discounted registration fee for the conference. Members have access to all information posted on our website and the ability to post announcements. IAMOT publishes a newsletter which contains current information on the field of Management of Technology from all over the world. IAMOT also offers its members discounts for certain professional journals, and offers priority status in receiving reports and publications sponsored by IAMOT. Finally, IAMOT offers its members the benefit of participating in an Association which supports research and application projects, world wide, in cooperation with government or private organizations or in its own initiative, an association which encourages education in the field of Management of Technology, and acts as an information resource center in the field.

International Association for Social Science Information Service and Technology
(US – International)
www.iassistdata.org

The International Association for Social Science Information Service and Technology (IASSIST) is an international organization of professionals working in and with information technology and data services to support research and teaching in the social sciences. Its 200 members are from a variety of workplaces, including data archives, statistical agencies, research centers, libraries, academic departments, government departments, and non-profit organizations.
Figure 3: Selected Resources (continued)

International Council for Science: Committee on Data for Science and Technology
(International)
www.codata.org/about/who.html

The Committee on Data for Science and Technology (CODATA) is an interdisciplinary Scientific Committee of the International Council for Science (ICSU) which works to improve the quality, reliability, management and accessibility of data of importance to all fields of science and technology. CODATA is a resource that provides scientists and engineers with access to international data activities for increased awareness, direct cooperation and new knowledge. CODATA was established 33 years ago by ICSU to promote and encourage, on a world-wide basis, the compilation, evaluation and dissemination of reliable numerical data of importance to science and technology. Today 23 countries are members, and 14 International Scientific Unions have assigned liaison delegates.

CODATA is concerned with all types of data resulting from experimental measurements, observations and calculations in every field of science and technology, including the physical sciences, biology, geology, astronomy, engineering, environmental science, ecology and others. Particular emphasis is given to data management problems common to different disciplines and to data used outside the field in which they were generated. CODATA’s objectives are: (1) The improvement of the quality and accessibility of data, as well as the methods by which data are acquired, managed, analysed and evaluated, with a particular emphasis on developing countries; (2) The facilitation of international cooperation among those collecting, organizing and using data; (3) The promotion of an increased awareness in the scientific and technical community of the importance of these activities; and (4) The consideration of data access and intellectual property issues. In short, the reason for CODATA is to help foster and advance science and technology through developing and sharing knowledge about data and the activities that work with data.

International Intellectual Property Institute
(USA – International)
www.iipi.org

The International Intellectual Property Institute (IIPI) is a not-for-profit 501(c)(3) corporation located in Washington, DC. As an international development organization and think tank, IIPI is dedicated to increasing awareness and understanding of the use of intellectual property as a tool for economic growth, particularly in developing countries. Since 1998 the Institute has been engaged in a wide range of activities both abroad and within the United States, including critical research, public education, policy and training workshops, technical assistance, institution building and consultative services.

The work of the Institute focuses on establishing constituencies of policymakers, business leaders and judicial stakeholders in the developing world who understand that effective, enforceable intellectual property rights can be a tool to promote economic development in their own countries, and not simply a nuisance or legal obligation. Because we live in a world where wealth generation is increasingly the result of ideas rather than products, it is critical to assist developing countries in moving away from commodities-based economies through the creation of thriving industries rooted in the intellectual assets of their citizens. The Institute seeks to increase awareness and understanding of the use of intellectual property — patents, copyrights and trademarks, trade secrets, industrial designs, etc. — as a tool for sustainable economic growth. With support from private corporations, the United States and foreign governments and other international development organizations, IIPI is working to increase the capacity of human intellectual assets and creativity to fuel economic growth and improve standards of living.
Figure 3: Selected Resources (continued)

International Network of Research Management Societies (INORMS)
(International)
www.inorms.org

INORMS was formed in 2001 to bring together research management societies and associations from across the globe. Its purpose is to enable interactions, sharing of good practice, and joint activities between the member societies, to the benefit of their individual memberships. Each member society has its own distinct remit, constitution, membership and geographical base, but we each face similar issues. The nature of research management and administration is changing, and it is becoming more professional. The economic and political imperatives and pressures are common across the globe. The network enables the officers of the member societies to compare their national or regional issues, and to learn from each other. Through INORMS, the network is able to transfer training course structure and content, adopt comparable support mechanisms, and jointly develop training materials. The objectives of INORMS are: (1) to internationalise the body of knowledge on research management; (2) to exchange best practice; and (3) to develop international approaches to supporting the research enterprise.

Israel Science Foundation
(Israel)
www.isf.org.il

The Israel Science Foundation (ISF) is now Israel’s predominant source of competitive grants funding for basic research. Its roughly $50 million annual budget funds 1,200 grants a year, providing two-thirds of all such funds. Every year, some 10,000 expert reviewers from Israel and abroad are involved in peer-reviewing the scientific merit of its proposals. The ISF awards grants in all fields of: Exact Sciences and Technology; Life Sciences and Medicine; Humanities and Social Sciences to researchers at Israeli universities, other centers of higher education, research centers and medical centers. Most funds (96%) are provided by the Government of Israel via the Planning and Budgeting Committee (PBC) of the Israel Council for Higher Education, under a long-term agreement.

Joint Research Councils
(United Kingdom)
www.rcuk.ac.uk

Research Councils UK (RCUK) is a strategic partnership through which the UK’s eight Research Councils work together to champion the research, training and innovation they support. The Research Councils are the main public investors in fundamental research in the UK with interests ranging from bio-medicine and particle physics to the environment, engineering and economic research. RCUK works alongside the Office of Science & Technology (OST) to support the UK’s finest academic researchers and to ensure the best investment of public money in research. The partnership is led by the RCUK Executive Group which comprises the eight Chief Executives of the Research Councils.

Jordanian Royal Scientific Society
(Jordan)
www.rss.gov.jo/index.html

The aims and functions of the Royal Scientific Society are to (1) support the development process in Jordan through R&D to strengthen the role of SMEs in Jordan’s economy; (2) promote itself as a reference technical institution in Jordan and the region; (3) expand its role as a certification body for both skilled manpower and industrial products; (4) strengthen co-operation with similar institutions to promote mutual interests; (5) develop human resources; (6) encourage and support the start-up, incubation and development of innovation-led knowledge-based businesses; (7) carry out studies and applied scientific research related to industry and environment, and to the various areas of development; (8) conduct economic and technical feasibility and analytical studies with regard to
development projects that fall within RSS scope of competence; (9) carry out joint research with scientific, production-oriented and service institutions at the national, regional and international levels; (10) offer technological consultations and services, calibration and conformity assessment of locally produced and imported products; (11) develop its laboratories, provide them with up-to-date equipment and orient them towards serving the objectives of scientific and technological research and the needs of public and private sectors; (12) co-operate with agencies concerned with setting national technical standards and specifications and provide technical services that facilitate their application and ensure proper quality control of goods and materials; (13) upgrade human capabilities and technical skills through the provision of distinctive training opportunities; (14) contribute to the transfer and adaptation of appropriate technologies to the benefit of industrial and socio-economic development in Jordan; (15) cooperating with local, regional and international organizations in science and technology for the purpose of networking and joint venturing; and (16) offer research facilities to entrepreneurs to enable them to start technological research, joint development and new businesses.

Kenya National Academy of Sciences
(Kenya)
www.knas.g3z.com

The objectives and purposes for which the Academy is constituted are to (1) promote the advancement of science and technology by establishing and enhancing standards of scientific and technological endeavour and achievement in Kenya, and to recognize outstanding contributions in the field of science and technology; (2) facilitate coordination among the different groups of scientists and the potential users of science and technology; (3) improve cooperation through international agreements and programmes between Kenyan scientists and the international scientific community. To promote the creation of scientific bodies in Kenya, provide professional guidance in their activities, and administer and improve resource utilization for purposes of research and projects; (4) provide the Government with scientific and technological information for policy formulation, execution and ways in which scientific projects may be instituted, carried out or revised; (5) synthesize and disseminate knowledge through publication of scientific and technological information; (6) cooperate with the National Council for Science and Technology [NCST] in the formulation of policies and programmes designed to encourage the development and application of science and technology for national development; and (7) organize, participate or collaborate in the organization of scientific meetings within and outside Kenya; to hold symposia, and to arrange visits for scientists from other countries to Kenya and vice versa.

Kingdom of Morroco – Hassan II Academy of Science and Technology
(Morroco)
www.academie.hassan2.sciences.ma/an/index.php

The Hassan-II Academy of Science and Technology is a dynamic organisation that seeks to achieve the general objectives set above and mainly the followings: (1) ensure that scientific and technical research ranks high among the values upheld by the nation; (2) propose to the authorities the relevant routes and means to kindle the scientific spirit within the Moroccan society; (3) provide local scientists and researchers with a special forum for debate and interaction; (4) foster high-level communication channels between national scientists and the international scientific elite; (5) work for the dissemination of science by organizing panels and scientific events, publishing relevant material, and opening science libraries; (6) review and evaluate the scientific findings and innovations submitted for its consideration; (7) ensure that the scientific and technical research exercises are made within the moral and ethical prescriptions; (8) contribute at setting the general orientations for the scientific and technological development; (9) put forward recommendations about priorities and how to achieve the nation’s targets in terms of research; (10) contribute to the elaboration of scientific human resources
Figure 3: Selected Resources (continued)

Policy capable of attracting high-profile scientists and, more importantly, promoting an adequate intellectual and material environment so as to provide talented Moroccan researchers who are sought or employed by foreign research laboratories and centers, with an efficient incentive to stay in their country; (11) monitor continuously the progress made in the field of technology for the benefit of the nation; (12) carry out studies, analyses and surveys in connection with research activities; (13) encourage the implementation of research programs which have been set in accordance with national priorities, determine their relevance and scientific value, and, when necessary, allocate them appropriate financial resources; (14) assess the implementation of research programs sponsored by the Academy, and to take all the relevant steps to enhance the resources of existing and projected research laboratories and other facilities; (15) propose to the relevant authorities the modalities on scientific and technical cooperation for participating in regional or international research programs; (16) provide advises on the evaluation of the activities carried out by the national research institutions involved in these programs; and (17) help to establish the adequate mechanisms for consultation, on a permanent basis, between the research and technical innovation community and its social and economic counterparts.

Korean National Academy of Sciences (KNAS)
(Korea)

The National Academy of Sciences, Republic of Korea, is the senior national organization of distinguished Korean scientists and scholars. Its primary objective is to promote learning and research in all areas of sciences by conferring membership and preferential treatment to those who have made outstanding contributions to the advancement of sciences and learning. The Academy consists of 150 Fellows who are selected by their peers for outstanding contributions to the sciences and education. The Academy is dedicated to (1) fostering the highest levels of learning and research in all areas of scholarship by conferring the National Academy of Sciences Award; (2) making available its members’ broad and varied knowledge to evaluate and advise on social, cultural, economic and scientific issues for the benefit of Korea; (3) promoting Korean scholarship and accomplishments internationally through active exchanges with other national academies; and (4) suggesting policy recommendations of the promotion of science to the national government.

Latin American Network Information Center
(Brazil – Latin America)
www1.lanic.utexas.edu/la/brazil/academic

This website provides a number of valuable links to a variety of academic and non-academic research resources throughout Brazil.

Licensing Executive Society
(International)
www.lesi.org

LES International is an association of 31 national and regional societies, each composed of individual members who are engaged in the profession of licensing and other aspects of transferring or profiting from intellectual property. The LES family is business-oriented for the most part, and its over 10,000 individual members include management representatives from companies both large, medium and small, scientists, engineers, academicians, governmental officials, lawyers, patent and trademark attorneys, and consultants.
Figure 3: Selected Resources (continued)

Madagascar National Academy of Arts, Letters and Sciences (ACNALS)  
(Madagascar)  
www.interacademies.net/CMS/2950/4243.aspx

The Academy was founded in 1902. The Academy is divided into four principal sections: (1) Linguistic Sciences; (2) Political and Ethical Matters; (3) Fundamental Sciences; and (4) the Applied Sciences. The Academy defines themes of national research, coordinates the activities of the Regional Academic Committees and those of other national scientific institutions. The Academy can have up to 80 members and 80 associated members residing in Madagascar.

Malaysian National Academy of Sciences  
(Malaysia)  
www.akademisains.gov.my

The Academy of Sciences Malaysia (ASM), established under the Academy of Sciences Malaysia Act 1994, seeks to (1) promote and foster the development of science, engineering and technology; (2) provide a forum for the interchange of ideas among scientists, engineers and technologists; (3) promote national awareness, understanding and appreciation of the role of science, engineering and technology in human progress; (4) promote creativity among scientists, engineers and technologists; (5) promote national self-reliance in the field of science, engineering and technology; (6) act as a forum for maintaining awareness on the part of the Government of the significance of the role of science, engineering and technology in the development process of the nation and for bringing national development needs to the attention of scientists, engineers and technologists; (7) analyse particular national problems and identify where science, engineering and technology can contribute to their solution and accordingly to make recommendations to the Government; (8) keep in touch with developments in science, engineering and technology and identify those developments which are relevant to national needs and to bring such developments to the attention of the Government; (9) prepare reports, papers or other documents relating to the national science, engineering and technology policy and make the necessary recommendations to the Government; (10) initiate and sponsor multi-disciplinary studies related to and necessary for the better understanding of the social and economic implications of science, engineering and technology; (11) encourage research, development, education and training of the appropriate scientific, engineering and technical manpower; (12) establish and maintain relations between the Academy and overseas bodies having the same or almost similar objectives in science, engineering and technology as the Academy; (13) advise on matters related to science, engineering and technology as requested by the Government from time to time; and (14) do such other acts which are consistent with 1994 Academy of Sciences Act as may be required in order to further the advancement of science, engineering and technology in Malaysia and the welfare and status of the Academy.

Mauritius Academy of Sciences and Technology (MAST)  
(Mauritius)  
www.interacademies.net/CMS/2950/7825.aspx

Please visit the MAST website for complete information on the group’s activities.

Mexican Academy of Sciences – academia mexicana de ciencias  
(Mexico)  
www.amc.unam.mx

The Mexican Academy of Sciences was founded in 1959 as a non-governmental non-profit organization of distinguished scientists, in all fields of research. Since that date, the Academy has grown in membership and influence, and since 2003, has more than 1,900 members in exact, natural and social sciences. The Academy’s mission is to (1) serve as a spokesman for the scientific community; foster the development and consolidation of the Mexican scientific community; promote
scientific research, training and dissemination in Mexico; and (2) promote exchanges with scientific organizations and communities in other countries. The Academy’s main activities include: (1) science promotion and dissemination; (2) awards and incentives for scientific research; studies; (3) exchange programs; (4) meetings and symposia; (5) national and international relations; and (6) relations with the Mexican Legislative Congress.

Ministry of Education, Culture, Sports, Science and Technology
(Japan)
www.mext.go.jp/english

The best site for valuable information on Japan’s Ministry of Education, Culture, Sports, and Science and Technology (MEXT). Indeed, MEXT is the government agency primarily responsible for research and development. Based on the “Second Science and Technology Basic Plan,” the government’s basic policy on science and technology for the five year period from FY2001, MEXT promotes comprehensive research and development in order to accomplish the highest creative achievements in worldwide comparisons. The Plan epitomizes the ideal form of the nation from the viewpoint of cultivating new wisdom through science and technology, supporting national life and economic activity and realizing international contribution. Furthermore, in order to realize these objectives, the Plan outlines a planned approach to prioritized policy, centered upon the focused, strategic promotion of research and development, as well as reform in the science and technology system. Moreover, academic research conducted primarily in universities and other institutions aims to explore the truth in all academic fields, from the humanities and social sciences to the natural sciences. Endorsing the three desirable goals of “promoting research of the highest worldwide standards,” “creation of new academia in the 21st century” and “contribution to society,” and in view of the “Second Science and Technology Basic Plan” as well as deliberations at the Council for Science and Technology, MEXT is promoting diverse academic research in a wide spectrum of disciplines according to the following basic direction of promotion: (1) respect for the autonomy of researchers; (2) progress in all academic fields; and (3) integrated promotion of education and research.

Mongolian Academy of Sciences (MAS)
(Mongolia)
www.mas.ac.mn/en/index.php?option=com_frontpage&Itemid=1

Knowledge has always been of high regard and great value for Mongolians. It was in the 13th century, when Mongolians, in particular the Great Khaan Khubilai, established the first academic organization of the nation, “The Academy of Worthies.” Mongolia’s first center of modern sciences came into being in 1921 when the Government of newly independent Mongolia issued a resolution declaring the establishment of the “Institute of Literature and Scripts,” which was later upgraded into “Institute of Sciences” and then “Institute of Sciences and Higher Education.” In 1961, it was finally reorganized as “the Mongolian Academy of Sciences” (MAS). At present, under its direct supervision the MAS operates 16 research Institutes and Centers, the Ulaanbaatar University. Furthermore in joint operation it supervises 9 research and production corporations.

National Academy of Exact, Physical and Natural Sciences / Academia Nacional de Ciencias Exactas, Físicas y Naturales (ANCEFN)
(Argentina)
www.ancefn.org.ar/academia/english.html

The National Academy of Exact, Physical and Natural Sciences (Academia Nacional de Ciencias Exactas, Físicas y Naturales, ANCEFN) was established in 1874 to promote science in Argentina and honor scientists primarily through their election as full voting members. At present, the Academy has 33 full voting members, 29 corresponding national members, 59 corresponding foreign members, and 6 honorary members. The Academy bestows awards to scientists for their distinguished contributions.
Figure 3: Selected Resources (continued)

in diverse areas of science and technology and has exchange programs with academies, societies, and learned bodies in several countries. The Academy publishes journals and reports and recognizes young scientists through an awards scheme, and arranges seminars and symposia. The Academy also grants fellowships to university students.

National Academy of Sciences (NAS)
(United States)
www.nas.edu/

The National Academies bring together committees of experts in all areas of scientific and technological endeavor. These experts serve pro bono to address critical national issues and give advice to the federal government and the public. Four organizations comprise the Academies: (1) National Academy of Sciences, (2) National Academy of Engineering, (3) Institute of Medicine, and (4) National Research Council.

National Academy of Science and Technology (NAST)
(Philippines)
www.interacademies.net/CMS/2950/4291.aspx

The National Academy of Science and Technology (NAST) was created in 1976 to recognize outstanding achievements in science and technology and to serve as a reservoir of competent scientific and technological manpower for the country. In 1982 the Academy became the advisory body to the President of the Republic of the Philippines on policies concerning science and technology. Current membership is 51 academicians, grouped into the following divisions: Agricultural Sciences; Biological Sciences; Chemical, Mathematical, and Physical Sciences; Engineering Sciences and Technology; Health Sciences; and Social Sciences.

National Association of College and University Attorneys
(United States)
www.nacua.org

The mission of the National Association of College and University Attorneys (NACUA) is to advance the effective practice of higher education attorneys for the benefit of the colleges and universities they serve. NACUA is organized to assist higher education attorneys in representing and advising their client institutions. To achieve this purpose, NACUA and its member volunteers will: (1) Help member attorneys provide high quality and responsive legal services and information to institutions of higher education; (2) Deliver services that allow member attorneys to provide effective counsel to colleges and universities in the areas of administration, policy and ethics; (3) Support a learning environment for professional development of its member attorneys and help them to maintain the highest professional and ethical standards; and (4) Work to improve the understanding of legal issues and to enhance the role of NACUA and its member attorneys in the higher education community. NACUA and its members are committed to practicing and promoting the core values of quality, service, civility, collegiality, diversity, inclusiveness and respect.

National Research Council/Conseil national de recherches Canada
(Canada)
www.nrc-cnrc.gc.ca/main_e.html

NRC is a Government of Canada organization, and its mandate — set out in the National Research Council Act (NRC Act) — authorizes NRC is responsible for: Undertaking, assisting or promoting scientific and industrial research in different fields of importance to Canada; Establishing, operating and maintaining a national science library; Publishing and selling or otherwise distributing such scientific and technical information as the Council deems necessary; Investigating standards and methods of measurement; Working on the standardization and certification of scientific and technical
apparatus and instruments and materials used or usable by Canadian industry; Operating and administering any astronomical observatories established or maintained by the Government of Canada; Administering NRC’s research and development activities, including grants and contributions used to support a number of international activities; and Providing vital scientific and technological services to the research and industrial communities. This mandate is discharged to a great extent through the operation of the NRC Industrial Research Assistance Program, the NRC Canada Institute for Scientific and Technical Information, and the Canadian Technology Network. For more information, visit the Justice Canada website at www.laws.justice.gc.ca/en/N-15/index.html.

National Research Council/Consiglio Nazionale delle Ricerche
(Italy)
www.cnr.it/sitocnr/Englishversion/Englishversion.html

The National Research Council (CNR) is a public organization; its duty is to carry out, promote, spread, transfer and improve research activities in the main sectors of knowledge growth and of its applications for the scientific, technological, economic and social development of the Country. To this end, the activities of the organization are divided into macro areas of interdisciplinary scientific and technological research, concerning several sectors: biotechnology, medicine, materials, environment and land, information and communications, advanced systems of production, judicial and socio-economic sciences, classical studies and arts. CNR is distributed all over Italy through a network of institutes aiming at promoting a wide diffusion of its competences throughout the national territory and at facilitating contacts and cooperation with local firms and organizations. From the financial point of view, the main resources come from the State, but also from the market: even 30% of its balance sheet, an extraordinary result, is the result of revenues coming from external job orders for studies and activities of technical advice as well as from agreements with firms, contracts with the European Union and with the other international organizations.

Nepal Academy of Science and Technology
(Nepal)
www.nast.org.np/

Nepal Academy of Science and Technology (NAST) is an independent apex body established in 1982 to promote of science and technology in the country. The Academy is entrusted with four major objectives: advancement of science and technology for all-round development of the nation; preservation and further modernization of indigenous technologies; promotion of research in science and technology; and identification and facilitation of appropriate technology transfer.

Pakistan Academy of Sciences
(Pakistan)
www.paspk.org

The aims and objectives of the Pakistan Academy of Sciences is to (1) promote higher studies and research on pure and applied sciences in Pakistan and to disseminate scientific knowledge; (2) formulate standards of scientific effort and achievement in Pakistan and to recognize outstanding contributions to the advancements in science; (3) publish and assist in the publication of scientific Proceedings, Journals, Transactions, Monographs, Books and other scientific literature; (4) establish and maintain association and relations among Pakistani scientists and the international groups and unions of scientists and organize meetings including coordination of scientific activities of Pakistani and overseas scientists; (5) award grants, scholarships, fellowships, prizes and medals for scientific research; (6) undertake such scientific work of national or international importance as the Academy may be called upon to perform by the Government of Pakistan; and (7) have advisory and consultative status with the Ministries and Divisions of the Government dealing with scientific and technical matters, and to represent internationally the scientific work of Pakistan; (8) secure and 
administer funds, endowments and other grants for the promotion and development of scientific research or projects of a scientific nature, and for the attainment of the aims and objectives of the Academy. And (9) To do all other lawful things that the Academy may consider conducive to or necessary for the attainment of its aims and objectives.

Palestine Academy of Science and Technology
(Headquarters in Jerusalem and branches in Ramallah and Gaza)
www.palestineacademy.org/main.htm

The Academy aims at institutionalizing scientific and technological research in Palestine, promoting scientific discovery and innovative technological advances, in addition to fostering the use of science and technology in various domains. Furthermore, it aspires to obtain a fundamental role in coordinating scientific efforts between the private and the public sectors in order to encourage a strong national economy that is globally competitive through the support of the Palestinian science and technology base and through partnerships with governmental, non-governmental, local and international bodies.

Peruvian Academy of Exact, Physical and Natural Sciences
(Peru)
www.cerosis.org

The Academy of Exact, Physical and Natural Sciences was founded in Lima in 1938 by 37 founding fellows, under the auspices of the University of San Marcos. In 1939, the Government of Peru, considering that the academy was called to assume a guiding role in national activities, and the high scientific and cultural values it embodied, awarded official recognition. In 1966 the academy name was modified to National Academy of Sciences of Peru with the main role to perform advisory functions at the Government’s request, in matters related to its expertise. The NAS of Peru has a maximum of 40 fellows. Plans are underway to amend the statutes and introduce the category of senior academician.

Research-Africa.net
(Africa)
www.research-africa.net/getPage.cfm

Research Africa is for African government and institutional policy makers, researchers and research managers. Research Africa strengthens the African science and technology policy-making, and research community, and connects them with the world scientific community.

Research Promotion Bureau Ministry of Education, Culture, Sports, Science and Technology
(Japan)
www.mext.go.jp/english/shinkou/index.htm

The Research Promotion Bureau is responsible for the formulation of policies to promote cross-field research such as encouraging inventions, promoting the application of research results and cooperation among industries, academia and government, improving the research environment and R&D infrastructure by, for example, enhancing the research information infrastructure, and performing work relating to fundamental research. The Bureau also formulates policies to promote scientific study, including the establishment of scientific institutions and the provision of assistance for scientific research, and performs work relating to basic and fundamental research and development in such areas as IT, life science, and quantum and radiation research.

Nigerian National Academy of Sciences
(Nigeria)
www.interacademies.net/CMS/2950/4298.aspx

The Nigerian Academy of Sciences (NAS) was inaugurated in 1977 after five years of renewed effort by concerned Nigerian scientists under the auspices of the Science Association of Nigeria (SAN) to
Figure 3: Selected Resources (continued)

overcome the obstacles that plagued previous efforts of about 20 years to establish a formal Academy of Science. The academy membership is currently 100, and an average of 5 new members are elected each year. The main objectives of the academy are to (1) promote the growth, acquisition and dissemination of scientific knowledge; and (2) facilitate its use in the solution of major problems of national interest.

Royal Society of New Zealand
(New Zealand)
www.rsnz.org

The Royal Society of New Zealand is an independent, national academy of sciences, a federation of some 60 scientific and technological societies, and individual members. The Society promotes a critical awareness of science and technology in schools, in industry and in society. The Society invests in excellence in people and ideas, and puts them to work as an inspiration to New Zealanders. The Society administers several funds for science and technology, publishes 8 journals, offers science advice to government, and fosters international scientific contact and co-operation.

RSC: The Academies of Arts, Humanities and Sciences of Canada/
SRC : Les Académies des arts, des lettres et des sciences du Canada
(Canada)
www.rsc.ca/index.php?lang_id=1

RSC: The Academies of Arts, Humanities and Sciences of Canada, is the senior national body of distinguished Canadian scientists and scholars. Its primary objective is to promote learning and research in the arts and sciences. The Society consists of approximately 1,800 Fellows: men and women from across the country who are selected by their peers for outstanding contributions to the natural and social sciences and in the humanities. The RSC is a dedicated to (1) making available its members’ broad and varied knowledge to evaluate and advise on social, cultural, economic and scientific issues for the benefit of Canada, through projects, the organization of annual symposia and its publications; (2) assessing issues of importance to Canadians and providing independent expert advice, notably to government, on matters of public interest; (3) fostering the highest levels of learning and research in all areas of scholarship and recognizing outstanding achievements in research and innovation by electing new Fellows and awarding medals and prizes; and (4) promoting international collaboration and Canadian scholarship and accomplishments internationally through active exchanges with other national academies.

Russian Science News Agency
(Russia)
www.informnauka.ru/eng/index.shtml

Informnauka is a science news agency formed in September 1999. The aim of the agency is to keep journalists informing of science-related events and research progress in Russia. Information presented by Informnauka is used for publication by many Russian national newspapers, journals, and television and radio companies. Informnauka was established by Chemistry and Life, a magazine of popular science with thirty-five year history. Informnauka has connections with research groups in academic institutions, state research centers and universities all over the Russian Federation and CIS countries.

Science Council of Japan (SCJ)
(Japan)
www.scj.go.jp/en/

The Science Council of Japan was established in January 1949 as a “special organization” under the jurisdiction of the Prime Minister for the purpose of promoting and enhancing the field of science, and having science reflected in and permeated into administration, industries and people’s lives. Its two
functions are: (1) To deliberate on important issues concerning science and help solve such issues; and (2) To make coordination among scientific studies to achieve higher efficiency. The SCJ consists of 210 members and some 2,000 associate members. The SCJ organization comprises a General Assembly, an Executive Board, three Section Meetings (Humanities and Social Sciences, Life Sciences, and Physical Sciences and Engineering), 30 committees based on fields of specialties, five Administrative Committees for operation, and issue-oriented ad hoc committees.

**Scottish Funding Council**  
*(Scotland)*  
[www.sfc.ac.uk/](http://www.sfc.ac.uk/)

The Scottish Further and Higher Education Funding Council (SFC) was formally established on 3 October 2005. The new Council creates a single body providing a strategic overview of tertiary education in Scotland and will secure a more coherent system of high-quality learning and research. In promoting further and higher education in Scotland, the new Council will support colleges and universities in the: Delivery of high quality programmes for learners; Investment in modern facilities for learning and research; and Being flexible and responsive in allowing access to lifelong learning for all.

**Scottish Research Information System**  
*(Scotland)*  
[www.scottishresearch.com](http://www.scottishresearch.com)

The Scottish Research Information System (SRIS) is a starting point for finding out about Scotland’s vigorous research, development, consultancy and innovation resources, and keeping pace with innovation. SRIS brings together the powerful capabilities of universities and institutes in Scotland, and the vital interests of organizations across the world that can make good use of these resources.

**Senegalese Academy of Sciences/académie des sciences et techniques du sénégal**  
*(Senegal)*  
[www.interacademies.net/CMS/2950/4242.aspx](http://www.interacademies.net/CMS/2950/4242.aspx)

The Senegalese Academy of Sciences was set up in November 1999 to promote sciences and technology, and assist the government in defining its scientific and technological policy. Its annual assembly’s opening session is chaired by the Head of State, Grand Patron of the Academy, and 60 seats are available for the three sections: (1) medical sciences; (2) sciences and technology; and (3) agriculture and veterinary medicine. Current academy activities include the identification of expert scientists, promotion of science to the general public through symposia, lectures and prizes, and the use of regional and international networking.

**Singapore National Academy of Sciences (SNAS)**  
*(Singapore)*  
[www.interacademies.net/CMS/2950/4313.aspx](http://www.interacademies.net/CMS/2950/4313.aspx)

The Singapore National Academy of Science is an umbrella organization for the premier scientific societies in Singapore. Established in 1967, its principal mission objective is the promotion of science and technology in Singapore. The 9 scientific societies under the aegis of the Academy are: Institute of Physics Singapore; Singapore Association for the Advancement of Science; Singapore Institute of Biology; Singapore Mathematical Society; Singapore National Institute of Chemistry; Singapore Institute of Statistics; Singapore Society for Microbiology & Biotechnology; Singapore Society for Biochemistry & Molecular Biology; and the Science Teachers Association of Singapore.
Figure 3: Selected Resources (continued)

Society of Research Administrators International
(USA – International)
www.srainternational.org/sra03/index.cfm

According to SRA’s Mission Statement: The society is an international organization dedicated to the education and professional development of research administrators, as well as the enhancement of public understanding of the importance of research and its administration.

Southern African Regional Universities Association
(Southern Africa)
www.sauvca.org.za/sarua/about_sarua

Excellence, growth and sustainability of university education, research and development will be a leading indicator of future growth of SADC regional economies and the quality of life of their people. The need for greater co-operation and collaboration within higher education in the SADC region has been a long-standing one. The Southern Africa Regional Universities Association (SARUA) brings together the leadership of 43 universities within the SADC region in order to achieve this reality. Launched in February 2005, SARUA will be the first association of its kind in Africa to simultaneously address the capacity and research needs of higher education institutions and the social, cultural and economic development priorities of the region.

Southern African Research and Innovation Management Association
(Southern Africa)
www.sarima.co.za

The objectives of the South African Research and Innovation Management Association (SARIMA) are: (1) Professional development and capacity building of those involved in managing research and innovation systems; (2) Promotion of best practice in the management and administration of research and innovation to create value for education, public benefit and economic development; (3) Creation of awareness in academic and public forums of the value of a stronger research and innovation system and the contribution it can make to economic and social development; (4) Advocacy of appropriate national and institutional policy in support of research and innovation and participation in the development and testing of policy; and (5) Advancement of science, technology and innovation, including addressing the asymmetries in access to, and diffusion of, knowledge between “North and South.” SARIMA operates at an institutional, national and international level, as well as across the research value chain, from research management to commercialization of research. SARIMA interacts and liaises with other organisations as required.

Sri Lanka National Academy of Science
(Sri Lanka)
www.interacademies.net/CMS/2950/4293.aspx

The National Academy of Sciences, Sri Lanka is a high-level, non-governmental scientific body, established in 1976. It is a body of eminent scientists who study fundamental issues relating to scientific developments in the country and issues of national importance, as well as the links between science and economic development. The main objectives of the Academy are to report on issues in which scientific and technological considerations are paramount to national interest; advise on activities related to the application of science and technology to national development; report on the management and rational utilization of the natural resources of Sri Lanka so as to ensure optimal productivity, consistent with the continued use of the biosphere. Currently, there are 105 fellows. The Academy has no permanent staff, but secretarial and other staff are recruited on an ad hoc basis.
Figure 3: Selected Resources (continued)

Sudanese National Academy of Sciences (SNAS)
(Sudan)
www.interacademies.net/CMS/2950/7823.aspx

The Sudanese National Academy of Sciences is a non-governmental organization currently located at the University of Khartoum. The main objectives of the Academy are to (1) raise the standard of and further develop theoretical and applied research in Sudan; (2) act as consultant and render advice to the Government and the private sector in the areas of science, education, technology and scientific research; (3) help in the dissemination of knowledge; (4) raise community awareness of the importance of science and technology for economic and social development; (5) collaborate with similar institutions in the developed and developing countries; and (6) offer scholarships, incentives and prizes in the area of scientific research.

Swiss Association of Research Managers and Administrators
(Switzerland)
www.sarma.ch/mission.htm

The Swiss Association of Research Managers and Administrators (SARMA) is a non-profit national network of professionals committed to improving the effectiveness, competitiveness and quality of research and innovation management in Switzerland. In today’s complex economic, social and political environment, R&D management and administration increasingly require professional competences that go way beyond scientific know-how. Ever since its foundation in 1999, SARMA’s principal objective has been to support capacity building in order to improve the R&D manager’s role as an interface between management and research, to foster professional skills and to eliminate barriers. With over 100 individual and 8 top ranking institutional members in both the public and the private sectors, SARMA has established itself as a well respected and widely known association for professionals in Switzerland who aspire to excel in their field. The Association is directed by the Board and the Programme Committee (PC), and governed by the General Assembly. The Board and the PC develop strategies and policies, and define priority topics, considering the best way to serve the membership in this complex professional area.

Tanzania Academy of Sciences (TAAS)
(Tanzania)
www.interacademies.net/CMS/2950/7061.aspx

Please visit the TAAS website for complete information about the organization.

Thai Academy of Science and Technology
(Thailand)
www.tast.or.th/index.html

The Thai Academy of Science and Technology (TAST) was established in 1997. It was organised by a group of scientists and technologist whose works have been continuously recognised and whose experiences and interests are vital to the development of the nation as a whole. TAST is a “non-government agency”. This is to ensure there is justice in giving recommendations to the government, organizations, and the public as a whole. TAST realises that the nation’s matters in science and technology have a profound impact on the nation as a whole. Therefore, TAST has made this its duty and priority to pick issues or matters that are currently in the eyes of the public and perform careful analyses by gathering additional information, doing research, and providing opportunities for discussion and criticism in order to bring to conclusion, further the study of, or formalise plans for the future. The Academy’s objectives are (1) to promote and be the driving force for S&T development in order to enhance the nation’s efficiency in the following areas: Environmental Management; competitiveness in the world market; quality of life, society and environment; and sustainable development of the nation; (2) study and analyse problems and barriers to S&T; (3) give science-related
Figure 3: Selected Resources (continued)

information, options and recommendations to the government and the public as a whole; (4) promote efficiency in managing and developing technology-related industry; (5) ensure that the works at Thai scientist and technologists are beneficial to the development of the nation; (6) promote harmony and integration between science & technology and other disciplines including the nation’s culture; (7) promote cooperation among associations, foundations and academic organisations in the development of human resources in the field of S&T; (8) create links with international organisations whose objectives are similar to TAST; and (9) NOT be involved in any political agenda.

**Trade Association of European Specialized Research and Technology Organizations (Europe)**

www.earto.org/home

The Trade Association of European Specialized Research and Technology Organizations (EARTO) is the trade association of Europe’s specialised research and technology organisations. Its members make a major contribution to strengthening Europe’s economic performance by supporting product and process innovation in all branches of industry and services, thereby raising the international competitiveness of European firms. EARTO represents the views of its members to European decision-makers. It publishes policy papers and organises briefing sessions. EARTO members sit on the European Union’s influential European Research Forum and Programme Advisory Committees. EARTO is a forum for exchange and co-operation between its members. It organises working groups, task forces, seminars and conferences. Members plan and perform major European R&D projects. Through NEXUS they pool their expertise to tackle major international multi-sectoral and multi-disciplinary assignments. EARTO provides its members with information about European policies and programmes, obtains official documents, and arranges meetings with European officials.

**Uganda National Council for Science and Technology (Uganda)**

www.uncst.go.ug/site/index.php

The UNCST mandate is to (1) develop and implement policies and strategies for integrating science and technology (S&T) into the national development policies; (2) advise the Government on policy matters for promoting S&T; and (3) coordinating and guiding national research and development in Uganda. The UNCST vision is “to be the centre of excellence for the management and integration of science and technology into the national development process.” UNCST’s mission is “to provide effective and innovative leadership in the development, promotion and application of science and technology and its integration in sustainable national development”. UNCST’s core values are: (1) commitment and hard work embracing team work to ensure efficient service/product delivery; (2) a high level of Integrity; and (3) excellence in the performance of duties and tasks.

**Western Norway Research Institute (Norway)**

www.vestforsk.no/english

The Western Norway Research Institute (WNRI) contributes to development and innovation in the public and industrial sectors by delivering relevant innovative ideas and knowledge of a high standard. Our work will contribute to increased insight, adaptability in terms of reorganisation, as well as innovation, particularly within the policy formulation, management, industrial development, and formation of value. WNRI is a non-profit foundation, established as an independent research institute in 1985. The institute is part of Norway’s national research system, and has a close co-operation with the Regional College of Sogn og Fjordane. Key research areas are in the fields of information technology, environmental research, and society and industry. The research staff represents various scientific areas such as social subjects, organisation subjects, technology subjects, the (liberal) arts, economics, and natural science.
Figure 3: Selected Resources (continued)

West African Research and Innovation Management Association
(West Africa)
www.warima.org
The West African Research and Innovation Management Association (WARIMA) is the professional body for research management in the West Africa region. WARIMA's objectives are: (1) Professional development and capacity building; (2) promotion of best practice; (3) increasing awareness of research and innovation issues in academic and public fora; (4) advocacy of appropriate national and institutional policy in support of research and innovation and participation in the development and testing of policy; (5) advancement of science, technology and innovation, including addressing the asymmetries in access to, and diffusion of, knowledge between “North” and “South;” (6) advancement of a code of professional standards through a framework of values and principles which members are expected to follow; and (7) enhancement of the profile of the profession.

World Intellectual Property Organization
(International)
www.wipo.int/portal/index.html.en
The World Intellectual Property Organization (WIPO) is an international organization dedicated to promoting the use and protection of works of the human spirit. These works — intellectual property — are expanding the bounds of science and technology and enriching the world of the arts. Through its work, WIPO plays an important role in enhancing the quality and enjoyment of life, as well as creating real wealth for nations. With headquarters in Geneva, Switzerland, WIPO is one of the 16 specialized agencies of the United Nations system of organizations. It administers 23 international treaties dealing with different aspects of intellectual property protection. The Organization counts 182 nations as member states.

Zimbabwe Academy of Sciences
(Zimbabwe)
www.interacademies.net/CMS/2950/4778.aspx
The Zimbabwe Academy of Sciences (ZAS) was established in 2005 and is a learned society which aims to promote national and international development by championing the acquisition and advancement of knowledge for application to sustainable development. The fellows of ZAS represent some of Zimbabwe’s accomplished scientists elected from among leading scholars in the life sciences, physical sciences and social sciences. ZAS is made up of three constituent colleges representing the main groups of scientific disciplines: College of Life Sciences; College of Physical Sciences; and College of Social Sciences.
Supplementary Material

This section includes expanded coverage of topics relating to international collaborations. These materials are culled from a variety of authoritative sources.

Compliance with Certain U.S. Laws that Affect Universities Engaged in Academic Activities Abroad

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I. Introduction

University faculty and staff may engage in a variety of academic activities with foreign institutions or individuals that present new and significant opportunities for the U.S. university. When a U.S. university considers offering goods, teaching or research services, or expanding its own programs overseas, it should be aware of the requirements and consequences of a handful of complex U.S. laws. These laws are not commonly thought to apply to educational activities, but in many cases, they do apply to U.S. persons and organizations, including U.S. universities, their faculty, and staff. Most carry civil and criminal penalties that could be assessed against institutions and even their individual employees if violations occur.

In this basic discussion, we identify and describe select U.S. laws relevant to a university’s international activity and illustrate when they may apply. First, we describe briefly the range of international activities undertaken by colleges and universities that may implicate these laws. Second, we highlight four areas of U.S. laws affecting a university’s international activity: economic sanctions, boycotts, export controls, and corrupt practices. Third, we review special concerns in international contracting. Finally, we provide a short checklist of legal considerations when doing business abroad in Figure 4, page 3520:18; a hypothetical case study containing “issue spots” where the laws discussed herein could apply is presented in Figure 5, page 3520:19; and a list of federal Web sites for information referred to in this discussion is included in Figure 6, page 3520:21.

The laws we discuss are often complex, interconnected, and sometimes contradictory, requiring careful analysis for each and every type of international activity. A small change in circumstances can significantly change the analysis. Keep in mind that additional U.S. laws or international treaties may also apply to a university’s foreign

* This article is based on a June 2006 presentation at the National Association of College and University Attorneys annual conference in Chicago, Ill., and a November 2006 presentation at the National Association of College and University Research Administrators annual conference in Washington, D.C.
business activity, but they are beyond the scope of this discussion.\(^1\) By following the basic considerations discussed here, appropriate legal safeguards can begin to be put in place to help ensure the success of a U.S. university’s international activity.

II. Typical International Activities of Universities

Typical international academic activities may involve university faculty, staff, and students. Examples of international activity that may give rise to the laws described in this article include:

◆ Attendance by faculty at overseas conferences

◆ Academic agreements, often called MOUs (memoranda of understanding), entered into by the institution as a whole, or by a school or division of the university, with an entity or individual overseas to provide services or goods, which may involve payments to foreign nationals or institutions, for the purpose of, for example, faculty or student exchange, offering of certificate or degree programs at foreign universities, or short-term training in specific subject areas

◆ Research grants from public or private funding sources to conduct work overseas, or that require subcontracts or agreements with entities or individuals overseas

◆ Co-authoring or co-publishing scholarly articles or journals with faculty at foreign academic and research institutions

III. U.S. Laws Unique to Doing Business with Foreign Entities

Economic Sanctions

General Limitations. Economic sanctions maintained by the United States are generally known as “embargoes,” and prohibit most imports, exports, and transactions with certain countries absent a general or specific license from the Office of Foreign Assets Control (OFAC) within the Department of the Treasury.\(^2\) A general license is a provision contained in the regulations authorizing a transaction that meets certain specifications. No license application is needed for a general license so long as the activity meets the relevant requirements. A specific license, on the other hand, must be approved by OFAC (no particular application form is required) and should include all necessary information required by the application guidelines or the regulations pertaining to the particular embargo program.\(^3\) Specific licenses should be requested early, as a license approval (or denial) from OFAC can take months. (For a further discussion of OFAC, see ¶3405.)

Over the years, OFAC has moved away from broad embargoes and focused on what are now known as “targeted sanctions,” or sanctions that target the precise nature of the threat to the United States. For example, as of May 2007, the United States currently maintains only three comprehensive embargoes — those against Cuba, Iran, and Sudan — which prohibit almost all exports to, imports from, and transactions or

\(^1\) For example, U.S. laws or international treaties on labor, immigration, human rights, the environment, labor, trade, tax, and antitrust.

\(^2\) See 31 CFR Part 500 \emph{et seq}.

\(^3\) See OFAC’s guidance at www.ustreas.gov/offices/enforcement/ofac/faq/answer.shtml#60.
dealings with the targeted country. Even entering into an agreement for academic activities with these countries will likely require an OFAC license. OFAC also administers targeted sanctions programs against a host of other countries, including the Balkans, Belarus, Burma (Myanmar), Côte d’Ivoire, Liberia, North Korea, Syria, and Zimbabwe. Each of these sanctions programs contains unique prohibitions and is described briefly in Figure 1.

Figure 1: Specific Country Sanctions

The following are general descriptions of each sanctions program. OFAC’s Web site at www.ustreas.gov/offices/enforcement/ofac and the regulations for each sanctions program should be consulted if any activities or transactions are contemplated with an entity located in (or national of) any of these countries.

Balkans (Serbia)

The sanctions against Serbia are quite targeted and now prohibit transactions with a short list of persons identified on the Specially Designated Nationals (SDN) List (see page 3520:6 under “Lists of Restricted/Prohibited Persons”).

Belarus

The sanctions block the property of certain persons viewed as undermining democratic processes in Belarus.

Burma (Myanmar)

U.S. persons are prohibited from exporting financial services to, or approving or facilitating transactions in, Burma (Myanmar). Imports of Burmese-origin items are also prohibited, as is new investment in Burma. Finally, several Burmese entities are listed on the SDN List and the U.S. government has blocked their property.

Côte d’Ivoire

These sanctions generally block the property of persons contributing to the political and social unrest in Côte d’Ivoire, who are designated on the SDN List.

Cuba

Under one of the broadest embargo programs, U.S. persons may not import or export Cuban-origin goods or services, travel to Cuba (with some exceptions), or charter Cuban vessels. Several exceptions apply to the embargo of Cuba that affect universities. These include travel and related transactions directly incident to full-time professional research, certain educational activities, and publishing. These exceptions may still require a license from OFAC, for example, for educational activities, but will not be subject to OFAC’s general policy of denial.

Iran

The OFAC embargo of Iran is also quite broad. U.S. persons may not import or export goods, services, or technology to Iran or the Government of Iran without a license from OFAC. The embargo contains some limited exceptions that are generally not applicable to universities. However, U.S. persons may

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4 Transactions or dealings are construed broadly and can include purchasing, selling, transporting, swapping, brokering, approving, financing, facilitating, or guaranteeing. See, e.g., 31 CFR
travel to Iran, and U.S. persons may undertake certain activities relating to publishing as described above. Note that even entering into an academic agreement or memorandum of understanding (MOU) with Iran or an individual in Iran (or Cuba or Sudan) may require a license from OFAC. Sponsorship by U.S. persons of conferences, or events at conferences, organized or co-organized by the Government of Iran or persons in Iran is prohibited.  

**Iraq**

The United States substantially lifted its embargo of Iraq effective May 23, 2003. U.S. persons may now do such things as invest in Iraq, import goods and services of Iraqi origin, travel to Iraq, and transfer funds to and from Iraq without a license from OFAC. OFAC has promulgated a general license authorizing such transactions with Iraq, subject to certain exceptions; however, the export of many items to Iraq still requires a license from the Bureau of Industry and Security (BIS) within the Department of Commerce.

**Liberia**

These sanctions generally block the property of certain persons and prohibit the importation of certain products from Liberia.

**Libya**

The United States substantially lifted its embargo of Libya in September 2004, enabling most commercial activities and financial transactions by U.S. persons.

**North Korea**

North Korean products can not be imported into the United States without a license. In response to North Korea’s test of a nuclear weapon, the U.N. Security Council adopted a resolution sanctioning North Korea on October 14, 2006. The resolution prohibits the purchase, supply, sale, or transfer to North Korea of military articles, technology and training, as well as “luxury goods.” It also freezes certain funds of the North Korean government related to their military and nuclear-related programs. In January 2007, the United States, through the Commerce Department, adopted restrictions on the export of luxury goods.

**Sudan**

U.S. persons may not import or export goods, services, or technology to Sudan. The embargo contains some limited exceptions that generally are not applicable to universities except for those related to the export of information and informational materials and the 2004 rule on publishing activities (see page 3520:5 under “Exceptions Important to Universities”).

**Syria**

The U.S. sanctions against Syria are primarily maintained by BIS and prohibit the export or re-export of any “product of the United States” or any good that is listed on the Commerce Control List. Excepted from this prohibition are food and medicines that are classified as “EAR99.” Several nationals of Syria have been designated on the SDN List, and thus no U.S. institution may do business with those persons.
Zimbabwe
The sanctions against Zimbabwe are quite targeted and focus on the designation of certain nationals of Zimbabwe. Those persons are identified on the SDN List and thus, in general, universities, like other U.S. organizations, may not engage in transactions with those persons.

Exceptions Important to Universities. The sanctions contain an important exclusion that affects universities; they expressly authorize the export of information and informational materials, in any format or medium. Information and informational materials includes publications, films, CD ROMS, and CDs, among others. This exclusion, however, only applies to information or informational materials fully created and in existence as of the date of the transaction. Exporting materials not fully created and in existence at the date of the transaction would generally require a specific license from OFAC.

In recent years, OFAC has relaxed its restrictions on publishing activities. In December 2004, OFAC published a rule providing for a general license for publishing activities in Cuba, Iran, and Sudan. With limited exceptions, the 2004 rule permits all activities with these countries incident to publishing, including among others, collaborating on the creation and enhancement of written publications, substantive editing of written text, and creating or undertaking a marketing campaign to promote written publications. The rule does not apply if the parties to the transaction include the governments of Cuba, Iran, or Sudan, or their agents or instrumentalities, or in other instances. Academic and research institutions and their personnel, however, are not considered part of these governments under the rule.

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1 31 CFR Part 588.
4 Cuban Assets Control Regulations, 31 CFR Part 515.
5 31 CFR 515.564.
6 31 CFR 515.565.
7 Iranian Transactions Regulations, 31 CFR Part 560.
9 31 CFR 575.533.
Specific Country Sanctions and Penalties. General descriptions of specific country sanctions are outlined in Figure 1 (page 3520:3). It is important to consult OFAC’s Web site at www.ustreas.gov/offices1/enforcement/ofac and the regulations for each sanctions program if any educational activities or transactions are contemplated with an entity located in (or national of) any of these countries.

OFAC can impose both criminal and civil penalties for violations of these sanctions (penalties vary depending upon the sanction regime in question), and they can apply to individuals and institutions (meaning both faculty and the university can be charged civilly and criminally). In 2006, the maximum civil and criminal penalties for an OFAC violation were increased, respectively, to $50,000 per violation and 20 years of imprisonment.8

State Sponsors of Terrorism. Several of the countries included in Figure 1 (Cuba, Iran, North Korea, Sudan, and Syria) are also designated by the U.S. Department of State as state sponsors of terrorism. Such designation imposes the following additional restrictions on these countries: (1) a ban on arms-related exports and sales; (2) controls over the export of dual use items (see page 3520:10); (3) prohibitions on economic assistance; and (4) imposition of miscellaneous financial and other restrictions.9

Lists of Restricted/Prohibited Persons. Both OFAC (Treasury) and BIS (Commerce) maintain lists of persons with whom many, if not all, transactions (including the provision of services or training) are prohibited. The most well known of these is OFAC’s list of “Specially Designated Nationals” (SDNs), generally considered the most comprehensive international list of suspected or known terrorists, persons connected to terrorism, narcotics traffickers, and others.

However, the U.S. government maintains other lists, briefly described in Figure 2, that also should be checked before engaging in international activities. It is sound practice to check the names of the university’s foreign counterparts, especially the name of the foreign person who signs a contract or MOU, against each of these lists prior to engaging in discussions with the foreign party. Another sound practice is to

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check the names of any foreign persons who will be paid, trained, or who will receive other services under the academic agreement. The lists can be accessed at www.bis.doc.gov/ComplianceAndEnforcement/ListsToCheck.htm. If any name or entity appears on the SDN or any other list, stop the transaction or discussion immediately and review the relevant list and nature of the listing before proceeding.

Figure 2: Lists to Check Before Engaging in International Activities

The following lists can be accessed at: www.bis.doc.gov/ComplianceAndEnforcement/ListsToCheck.htm.

1. Specially Designated Nationals (SDN). In general, if the person with whom the university wishes to do business is on OFAC’s SDN List, the university cannot deal with or transact business with the person. The list includes designated nationals of the countries sanctioned by OFAC, and it has expanded over the years beyond this simple designation to include foreign terrorist organizations, individual terrorists, narcotics traffickers, and others.

2. Denied Persons. BIS maintains a list of persons who are denied their privileges to export, most likely because they have violated U.S. export control laws.

3. Entities List. BIS also maintains an “Entities List” that includes individual foreign companies that are known or believed to be involved in weapons proliferation activities. As of June 2007, the Entities List includes companies located in China, India, Israel, Pakistan, Russia, Syria, and the United Arab Emirates. Generally, persons listed on the Entities List are ineligible to receive any items controlled by the Department of Commerce, although the specific restrictions applicable to each entity are identified on the list.

4. Unverified List. BIS also maintains an “Unverified List” that includes foreign persons who in the past were parties to a transaction with respect to which BIS could not conduct a pre-license check (PLC) or a post-shipment verification (PSV). Transactions with a person on the Unverified List raise a “red flag” with respect to the export.

5. Debarred Persons List. The Directorate of Defense Trade Controls (DDTC) within the Department of State maintains a list of “debarred persons” who are denied the privilege of participating directly or indirectly in the export of defense articles, technical data, or services.


7. General Order 3 to Part 736. This is a BIS general order imposing a license requirement for exports and re-exports of all items subject to the EAR where the transaction involves Mayrow General Trading or related entities located in Dubai, the United Arab Emirates, or Germany. It also prohibits the use of “License Exceptions” for exports or re-exports of any items subject to the EAR involving these entities.

IV. Anti-Boycott Laws

Two U.S. laws separately maintained by the Departments of Commerce and Treasury prohibit or penalize participation in, or cooperation with, foreign boycotts, which the United States does not sanction. For practical purposes, “unsanctioned foreign boycotts” means the Arab boycott of Israel, which is the focus here. These laws are extremely complex, and in some cases, are seemingly counterintuitive. Because this is a
basic discussion, we will only briefly present them here so that administrators are aware of the red flags signaling a potentially prohibited or reportable request (or both).

*Department of Commerce*¹⁰

Commerce maintains anti-boycott provisions that prohibit U.S. persons from refusing to do business with or in a boycotted country and from furnishing certain information about activities or operations with that country. Commerce regulations also require U.S. persons to report certain boycott-related requests.

**Prohibitions.** Boycott requests can come in a variety of forms. They may appear in the terms of letters of credit, in the actual contract or MOU, or may be verbal questions. They generally take the form of the following:

◆ Request from a boycotting country to *refuse to do business* with a “blacklisted” firm or in Israel; or

◆ Request to refuse to employ or to otherwise *discriminate* against persons on the basis of race, religion, or national origin; or

◆ Request to *furnish information* relating to your operations or business relationships with Israel or boycotted companies. In this case, responding “yes, we do business in Israel and will continue to do so” may be a violation.

**Reporting Requirement.** Certain boycott requests must be reported to Commerce on a form provided by the government — Form BIS 621-P or 6051P, available at www.bis.doc.gov/antiboycottcompliance/boycottrequestreportingform.htm. These reports are required on a quarterly basis. It is important to remember that even if you determine that a boycott request is actually permissible and not prohibited, it may still be reportable.

*Department of the Treasury*

Treasury maintains laws within the Internal Revenue Code that deny certain tax benefits

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¹⁰ Export Administration Act of 1979, 50 App. USC §2401 et seq.
to persons who participate in or cooperate with an unsanctioned boycott and requires the reporting of requests to participate and the actual participation in such a boycott.\textsuperscript{11} Treasury also requires that U.S. taxpayers with “operations in or related to” a boycotting country report those operations in their annual income tax return on Form 5713, available at www.irs.gov/formspubs/lists/0,,id=97817,00.html.\textsuperscript{12} The term “operations” is very broadly defined and includes “educational services.”

Treasury quarterly publishes a list of countries that require participation in an unsanctioned boycott. Figure 3 contains a current listing of such countries.

\begin{figure}
\centering
\begin{tabular}{ll}
\textbf{Kuwait} & \textbf{Saudi Arabia} \\
\textbf{Lebanon} & \textbf{Syria} \\
\textbf{Libya} & \textbf{United Arab Emirates} \\
\textbf{Qatar} & \textbf{Republic of Yemen}
\end{tabular}
\caption{Countries that Require Participation In an Unsanctioned Boycott}
\end{figure}

Keep in mind that the two sets of laws are different — some actions allowed (permissible and not reportable) by one set of laws may be prohibited and/or reportable by the other. Also keep in mind that several technical exceptions to these rules exist, and they should be examined in the context of the unique facts of each request received. Words or phrases that should trigger scrutiny include references in documentation to Israel, boycotts, or blacklists.

\textbf{Penalties for Violations.} Penalties for willful violations of these laws can be severe and reach up to $250,000 and imprisonment for up to 10 years for individuals; and $1 million for corporations, the loss of certain tax benefits, and denial of export privileges.

\section*{V. Export Controls}
\textit{Export Administration Regulations (EAR)}

Commerce also controls the export of “dual use” (i.e., having both civilian and military applications) goods, technology, and services (including training and certain information related to these items). The Export Administration Regulations (EAR) control these

\textsuperscript{11} 26 USC 999.
\textsuperscript{12} Even though many universities are not-for-profit, they usually file tax returns on their unrelated business taxable income.
items when they are identified on the Commerce Control List (CCL). These regulations also follow U.S.-origin goods, so that a U.S.-origin good exported to France, for example, in general may not be re-exported to a prohibited country. These controls are generally based on two factors: (1) the sophistication of the item; and (2) the intended destination. For example, the more sophisticated the item, the greater the level of control regardless of the destination. Conversely, items of lesser sophistication will likely be controlled to high-risk destinations, and certainly to countries embargoed by the United States.

If an item appears on the CCL, its classification will indicate whether a license is required for export to a particular country. If a license is required, a license exception may apply. Most items are classified under a catch-all provision called EAR99 and do not require a license. The EAR also contain “end-use” and knowledge-based controls that prohibit exports by an exporter that has knowledge or reason to know that an end-use could contribute to nuclear, missile, or chemical and biological weapons proliferation. In addition, knowledge that a violation of the EAR will occur or is intended to occur, creates the obligation to ask more questions and even stop the transaction.

Exclusions Specific to the University Context. The EAR exclude from regulation technology that is “published,” that is, generally accessible to the interested public in any form. This would include information provided at an open conference, or published in books at a price that does not exceed the cost of reproduction and distribution. It also includes submission of papers to domestic or foreign editors of journals and organizers of open conferences.

Also excluded is “fundamental research” when the resulting information is published and shared broadly in a scientific community. In this regard, research conducted by scientists, engineers, or students at a university will normally be considered “fundamental research.” Some exceptions do apply to this rule, however, and should be consulted (for example, prepublication review by third parties, particularly corporate sponsors). Government-sponsored research covered by contractual controls may also be exempt.

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13 15 CFR Part 774.
14 See 15 CFR Part 740 for license exceptions.
15 This is the Enhanced Proliferation Control Initiative or EPCI located at 15 CFR Part 744.
16 See the Department of Commerce’s “Know Your Customer” guidelines and “Red Flags” located at www.bis.doc.gov/ComplianceAndEnforcement/KnowYourCustomerGuidance.htm.
be restricted for export. Certain “educational information” released by instruction in catalog courses and teaching laboratories is also excluded.17

**Deemed Export Rule.** Under the “deemed export” rule, the release of technology to a foreign national (who is not a U.S. permanent resident) while in the United States is considered a “deemed export” to the home country of that national and is subject to any license requirements that would apply to an actual transfer to that country.18 In December 2005, the Commerce Department announced that it would no longer consider a rule change19 that would restrict foreign nationals’ access to sensitive technology based on their country of birth. Instead, it retains the current standard, which considers a foreign national’s most recent country of citizenship or residency.20

Nevertheless, in 2006 the Department of Commerce created the Deemed Export Advisory Committee (DEAC) with a mandate to review and provide recommendations to the Department of Commerce on deemed export policy. The role of the DEAC is to help ensure that the deemed export licensing policy of the United States most effectively protects national security while ensuring the United States continues to be at the leading edge of technological innovation.

‘Defense’ Services and Equipment (the ITAR)

The State Department controls the export of defense articles and services under the International Traffic in Arms Regulations (ITAR).21 The ITAR contain a list of the defense articles controlled by these regulations, called the U.S. Munitions List. A license is required from the State Department’s Directorate of Defense Trade Controls (DDTC) before any defense article or service may be exported and the exporter must be registered with the DDTC. The intended use of the item is not relevant to the ITAR controls; rather, the ITAR look to whether the item is “specifically designed, developed, configured, adapted or modified for a military application” among other considerations.22

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17 15 CFR Part 734.
18 15 CFR 734.2(b).
21 22 CFR Parts 120 through 130.
22 22 CFR 120.3.
In the university context, for example, space technology will frequently be subject to ITAR limitations. Any research done for NASA could trigger the ITAR regulations, although certain considerations apply for services performed for U.S. government entities.

**Penalties.** Penalties for violations of the EAR vary, but ultimately may reach the greater of $1 million or five times the value of the exports for each willful violation. Individuals can be fined up to $250,000 and imprisoned for 10 years, or both, for each willful violation. Civil penalties can reach up to $50,000 per violation. Penalties for violations of the ITAR can reach up to $1 million per violation and 10 years imprisonment for willful violations, and civil fines up to $500,000 per violation. In addition, a university found violating the ITAR can be debarred from contracting with the government and lose its exporting privileges.

(For a full discussion of export controls, see Chapter 3400.)

**VI. Foreign Corrupt Practices Act**

The Foreign Corrupt Practices Act (FCPA) contains two sets of restrictions, one relating to anti-bribery and the other relating to accounting practices. For purposes of academic activities of U.S. institutions, we will discuss only the anti-bribery provisions.

The anti-bribery provisions\(^{23}\) apply to U.S. universities as follows:

1. “U.S. universities and their employees.” Applies to domestic concerns (such as a U.S. university) or any officer, director, employee (such as a faculty member), or agent thereof.
2. “That use the mail, telephone, or fax.” Any means or instrumentality of interstate commerce, although amendments to the FCPA virtually eliminate this barrier to finding a violation.
3. “Corruptly.”
4. “With a payment or giving anything of value.” In furtherance of an offer, payment, promise to pay, or authorization of the payment of money or anything of value.\(^ {24}\)
5. “To a foreign official.” This includes a foreign official, foreign political party or party official, or any candidate for foreign political office, or to any person while knowing that any portion of the thing of value will be given to such persons.

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\(^{23}\) 15 USC 78dd-2.

(6) “For a business purpose.” For the purpose of influencing or inducing the official in order to secure an improper advantage to obtain or retain business.

Exception. The FCPA contains one exception and two affirmative defenses. Under the “grease payment” exception, a facilitating payment may be made to a foreign official if the purpose of the payment is to obtain the performance of a “routine governmental action.” A routine governmental action includes the issuance of permits, licenses, or other official documents or the processing of routine governmental papers such as visas.

The two affirmative defenses include the following:

(1) A payment that is lawful under the written laws and regulations of the foreign official’s country.

(2) A payment that is a reasonable and bona fide expenditure, such as travel and lodging expenses, directly related to either the promotion, explanation, or demonstration of a university’s services or to the execution or performance of a specific contract.

The first affirmative defense is extremely difficult to satisfy. The second defense occurs much more frequently. While the following examples will implicate the FCPA, a university incurs less risk under the reasonable and bona fide expenditure defense to the FCPA if it

◆ hosts a foreign official if the purpose is to demonstrate the capabilities of the university at its campus;
◆ honors a foreign country if the purpose is not to obtain or retain business;
◆ pays the reasonable travel and subsistence costs of a foreign official if the university is required by contract with the foreign government to pay these costs; or
◆ offers gifts of university memorabilia (i.e., mugs, caps, plaques, etc.) if the purpose is not to obtain or retain business but rather offered as a courtesy or token.

Note that these are general examples of “affirmative defenses” (meaning that the FCPA is implicated and any defense must be proved). FCPA jurisprudence generally considers more egregious conduct; however, gray areas such as these should be approached carefully. Each occasion should be reviewed independently against the particular overall circumstances of the university. For example, because of the risk that

<table>
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<tr>
<th>Reminder</th>
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<tr>
<td><strong>Foreign Corrupt Practices Act</strong></td>
</tr>
<tr>
<td>• Applies to universities, their officers, directors, employees, and faculty</td>
</tr>
<tr>
<td>• Prohibits “corrupt” payment of anything of value to a foreign official, foreign political party, or official thereof for the purpose of influencing any act or decision of such person to secure an improper advantage or to obtain or retain business</td>
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<tr>
<td>• Exception for “grease payment” for “routine governmental action”</td>
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<tr>
<td>• Includes two affirmative defenses, such as for certain reasonable and bona fide expenditures</td>
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</table>
a meal away from the university’s campus is not directly related to the promotion, demonstration, or explanation of products and services, a university should not pay for a meal for a foreign official in the foreign official’s home country.

**Penalties.** There has been a significant increase in FCPA investigations and enforcement over the last several years. Penalties for FCPA violations are severe. Corporations and other business entities are subject to a fine of up to $25,000,000 per violation. Individuals can be fined up to $5,000,000 per violation or imprisoned for a maximum of 20 years.25

**VII. Special Concerns in International Contracting**

Given that many university academic activities may occur pursuant to written grants, contracts, or other agreements, we address here concerns about immunity, choice of law, and arbitration clauses usually found in such agreements.

**Immunity and Consent to Jurisdiction**

Many foreign educational institutions are government-owned. If that is the case, the foreign institution itself may be entitled to sovereign immunity from enforcement of or performance under the contract.26 Claims of immunity are generally difficult to overcome.

Should the parties find themselves in a dispute where the foreign party claims immunity, the Foreign Sovereign Immunities Act (FSIA)27 provides the basis for obtaining jurisdiction over a foreign state (including their agents or instrumentalities) in U.S. courts. The ability to sue a foreign sovereign in the United States exists only when one of the exceptions of the FSIA applies. The most common exception is the “commercial activity” exception. Other exceptions include waiver of immunity or enforcement of an agreement to arbitrate or confirm an award to arbitrate (under certain circumstances).28 The commercial activity exception applies only where a sovereign acts in the manner of a private player in the market, or where it exercises only those powers that can also be exercised by private citizens as distinct from those powers particular to sovereigns.29

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26 Additionally, many contracts arise from a U.S. university’s contacts with a foreign embassy. Embassies may be entitled to diplomatic immunity under the provisions of the Vienna Convention on Diplomatic Relations (Vienna Convention on Diplomatic Relations, opened for signature April 18, 1961, 23 U.S.T. 3227, 500 U.N.T.S. 95 (entered into force April 24, 1964)). This international treaty is beyond the scope of this paper; however, these issues of immunity should be considered when assessing an institution’s ability to enforce an arbitral award or to attempt to subject the foreign party to litigation in a U.S. court.
27 28 USC 1605, et seq.
28 28 USC 1605(a).
29 See, e.g., Janini v. Kuwait University, 43 F.3d 1534 (D.C. 1995) (finding that Kuwait University’s termination of university employee’s contracts pursuant to Kuwaiti Government decree was a commercial activity).
While it will be difficult to overcome claims of immunity, a U.S. university can take steps to protect itself in case the contract or MOU is breached (most likely, where the foreign institution decides not to go forward with the exchange and does not pay for work already performed). First, the university can structure the payments required of the sovereign in advance, as explained below. Second, the university could draft an express waiver of immunity into the contract or agreement. Such a waiver is not foolproof, however, as U.S. courts generally view explicit waivers of sovereign immunity narrowly in favor of the sovereign, and they generally do not enlarge upon the express language of the waiver. The waiver must also be clear and unambiguous and intended for enforcement in the United States. In addition, an express arbitration provision may operate to confer jurisdiction in U.S. courts under certain circumstances.

Choice of Law Clauses

An area of potential disagreement between parties to an international agreement is the choice of law governing the contract in the event of a dispute. Generally, a U.S. university should avoid subjecting itself to the uncertainty and cost of defending itself in a foreign jurisdiction for work that will occur in that jurisdiction. Options for choice of law, in order of preference, include governing the contract under

1. A particular state law, such as the law of the jurisdiction of the university;
2. New York or Delaware law, which are generally recognized as commercially developed and neutral; or
3. Laws of a neutral international jurisdiction, such as the United Kingdom, assuming the other party is not located there.

A less desirable alternative is to leave out the choice of law clause. Sometimes the foreign institution, or even the U.S. university’s faculty member negotiating with the foreign institution, will want to leave out the choice of law clause, preferring instead to insert a clause to state only that the parties will work out their disagreements amicably.

While the parties can agree to work disputes out amicably as a first course of action, including a choice of law clause is preferable to no clause at all. In the absence of such a clause, the university runs the risk of a court determining that the law of the foreign entity controls, even if a majority of the negotiations or activity will occur in the United States. Moreover, the location in which the contract is signed may influence the court’s decision. If a program is located abroad, it is particularly important to identify the governing law in the contract because the contract will be performed outside the United States.

32 Choice of court may also become a relevant clause in international contracts. The Hague Conference on Private International Law has drafted a proposed Convention on Choice of Court Agreements dated June 30, 2005. It has not yet entered into force.
Decisions on choice of law clauses should be made in concert with the selection of a dispute resolution method, such as resolution through courts, arbitration, or mediation. If the parties to a contract wish to pursue arbitration, for example, the parties will need to consider the locale for the arbitration, which arbitration rules apply, which jurisdiction’s law will govern the arbitration, and whether the parties to the contract are parties to the New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards, discussed immediately below.

**Arbitration and Enforcement of Arbitral Awards**

The New York Convention on the Recognition and Enforcement of Foreign Arbitral Awards (NY Convention) was prepared by the United Nations and adopted in 1958. The NY Convention requires courts of contracting “states” to recognize an agreement to arbitrate and to recognize and enforce awards made in other states, with certain exceptions.

When contracting with a foreign institution for academic activities, it is sound practice to determine whether the location of the program or activity is in a country that is a signatory to the NY Convention. If it is, it is advisable to consider binding arbitration for resolution of any disputes arising out of the contract as an alternative to resolution through a foreign country’s courts. The NY Convention helps to ensure that any arbitral award received by a U.S. university will be recognized and enforced in the country in which the university is providing a service or otherwise doing business. Note, however, that if the NY Convention is relied on for enforcement, the contracting country’s declarations should also be reviewed. The NY Convention permits states to participate in the convention subject to certain declared conditions, such as requirements of reciprocal treatment and defining “commercial” disputes in accordance with domestic law.

**Financial Protections and Avoiding Disputes: Structure of Payments**

A university can protect itself financially by structuring the payments under the contract in such a way as to protect itself from breach. The best way to structure the payments is to require payments to be made in full before the actual work is performed, although payments may also be staggered throughout the term of the project. In this way, the university’s expenses are covered if the foreign institution gives notice of its

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33 The contract may specify rules, for example, of the American Arbitration Association (AAA), International Chamber of Commerce (ICC), United Nations Commission on International Trade Law (UNCITRAL), or the Hong Kong International Arbitration Center (HKIAC).
intent to terminate. If the foreign institution misses a payment, the U.S. university is alerted to possible breach and may notify its partner or stop work. By requiring advance payment, the university can avoid the situation of having to request funds from a foreign institution after that institution has terminated the relationship.

**VIII. Conclusion**

U.S. universities active overseas need to be cognizant of at least four categories of U.S. laws: economic sanctions, anti-boycott, export controls, and corrupt practices. Addressing possible legal concerns early in the development of a program or project abroad will help the university, and its individual employees, avoid running afoul of governmental authorities or seeing a relationship with the foreign individual or entity end in dispute. Any given international activity may raise more than one legal concern. By analyzing the potential effects of the laws discussed here on a university’s specific international activities, a university can help ensure the success of its ventures abroad.
Figure 4: Checklist of U.S. Laws Related to Academic International Activities

This short checklist of questions to ask yourself may be used to identify potential legal issues with a university’s international activity. Legal counsel can then further explore with sponsored research personnel the impact of these laws, and others, on a specific international activity.

**Economic Sanctions**

1. Is the university — or its employees — transacting business with an individual or an entity on the Specially Designated Nationals List of the U.S. Department of the Treasury, or other U.S. government lists?

2. Is the university — or its employees — engaging in activities with an entity or individual in a country subject to U.S. sanctions (the Balkans, Belarus, Burma (Myanmar), Côte d’Ivoire, Cuba, Iran, Liberia, North Korea, Sudan, Syria, or Zimbabwe)?

**Export Controls**

1. Is the university — or its employees — exporting goods, technology, or services overseas?

2. Is the export a “deemed export” such that a license may be required?

3. Do any exclusions apply, such as for fundamental research?

**Anti-Boycott**

1. Is the university — or its employees — conducting business in countries that participate in the Arab boycott of Israel (Kuwait, Lebanon, Libya, Qatar, Saudi Arabia, Syria, the United Arab Emirates, or Yemen)?

2. Has the university, or its employees, been asked to participate in a boycott against Israel, for example, in letters of credit, in a contract or MOU, in verbal question form, or in any other boycott?

**Foreign Corrupt Practices Act, Anti-Bribery Provisions**

1. Is the university — or its employees — engaging in international activity with officials of a foreign government?

2. Has the university — or its employees — offered or given anything of value to the foreign official for the purpose of influencing or inducing the official in order to secure an improper advantage or obtain or retain business?

3. If the university — or its employees — has offered or given something of value to a foreign official, was it for the purpose of facilitating the performance of a routine governmental action (the “grease exception”), or was it otherwise permissible under an affirmative defense of the FCPA?
**Figure 5: Case Study**

You are employed by U.S. University (U) as a Research Administrator. The U.S. Government has awarded U a $2 million five-year contract (Contract) to collaborate with the Ministry of Health (MOH) of Al-Malik, a fictitious country in the Middle East, to train physicians and nurses in infectious disease survey methods. The PI on this contract, Professor Jones, has conducted extensive research on the subject and has published his findings among university and health care experts in the field. He will share his findings with the MOH colleagues as part of the training. You are responsible for Contract compliance. The Contract requires U to comply with U.S. laws and the laws of Al-Malik.

The Contract contains an Anti-Terrorism Certification which U has signed. It states that U agrees not to provide “material support” (which is not defined in the Contract) to any known or suspected terrorists or terrorist organizations, and it refers U to the Specially Designated Nationals (SDN) List. You are not certain what this phrase requires you to do. You do know that Al-Malik is not subject to U.S. government sanctions at this time.

You and certain faculty from U travel to Al-Malik to meet with MOH officials to sign a final Memorandum of Understanding (MOU) setting forth the terms of your relationship for this project. While you are there, U and the MOH hold a kick-off dinner at one of the best restaurants in Al-Malik, attended by senior government officials of Al-Malik, U’s representatives, and a representative of the local U.S. government mission. You have offered for U to pay for the dinner from the Contract (the Contract does not include the costs of dinner for this function, but nothing also appears to bar U from paying for the dinner).

While at the dinner, one of the senior government officials of Al-Malik asks you, “Didn’t U recently conduct an infectious disease survey in Africa in partnership with an Israeli hospital?” You think it is OK to respond, but you are not sure.

The next day, U and the MOH agree that U should subcontract with a local entity to handle on-the-ground logistics, for which the entity would be paid $200,000 over five years. The MOH shares with you draft proposals from two local private companies it has identified. U and the MOH agree that the company that looks the best for the job is Logi-Al-Malik, which happens to be owned by an official of the Al-Malik Ministry of Commerce. The draft proposal calls for binding arbitration in Al-Malik in the event of a dispute between U and Logi-Al-Malik. Alternatively, Logi-Al-Malik proposes that any disputes be resolved in the courts of Al-Malik.

**Potential Issues**

What are the potential legal concerns with this fictitious scenario? Five are discussed below.

1. **Is there an Office of Foreign Assets Control (OFAC) concern?**
   
   Yes. U.S. law prohibits dealings of any kind with persons or entities on the SDN List, absent a license from OFAC, which will likely be denied. Regardless of the Contract’s requirements, it would be sound practice to run against the SDN list the names of any person or entity in Al-Malik to whom U will provide payment, training, or any other services under the Contract, and to check the names of the persons signing the MOU with the MOH and the subcontract with any entity selected to handle local logistics.
2. Is there a Foreign Corrupt Practices Act (FCPA) concern?

Yes. U has probably already violated the FCPA because it has offered to give something of value (the dinner) to Al-Malik government officials. The FCPA makes it a crime to offer, promise, or pay anything of value to any foreign official, foreign political party, party official, or any candidate for foreign political office for the purpose of influencing an official in order to obtain or retain business or secure an improper advantage. You may think that there would not be an FCPA issue because U and the MOH are already “in business” together or because U doesn’t think it has a corrupt intent. However, U could be seen to be entertaining for the purpose of retaining business, or for the purpose of influencing an official to give U future business. If all the other elements of the FCPA are met, corrupt intent is usually inferred. It is better not to pay for the dinner. Also, for similar reasons, because Logi-Al-Malik is owned by a foreign government official, it is better not to subcontract with Logi-Al-Malik.

3. Is there a boycott concern?

Yes, if we assume Al-Malik participates in the Arab boycott of Israel and appears on the Treasury Department’s quarterly list. If so, when the MOH official asks about U’s prior collaborations with partners in Israel, you should not answer, but should instead ask him why he wants to know. If he replies, “I just remembered that our Ministry won’t let me sign an MOU with anyone who does business with Israelis,” then you cannot answer his question, and U may need to report the receipt of a boycott request to the Departments of Commerce and Treasury. You must also report your project in Al-Malik as “operations” on your annual tax return if Al-Malik is a listed boycott country. Finally, U should except from the Contract clause requiring compliance with the laws of Al-Malik that it will not abide by the boycott of Israel.

4. Is binding arbitration in Al-Malik advisable?

Probably not. U would be better off trying to get arbitration in a neutral locale (e.g., the United Kingdom), using neutral rules of arbitration (e.g., United Nations Commission on International Trade Law (UNCITRAL), London Court of International Arbitration (LCIA), International Chamber of Commerce (ICC), etc.). Also, you would want to know if Al-Malik is a signatory to the New York Convention. If it is, then if U wins in arbitration, there is a better chance that the award will be enforced (i.e., U will get its money) in Al-Malik. If it is not a signatory, the risk is greater that U will not see its award enforced. However, even if Al-Malik has not signed the NY Convention, arbitration would still be preferable to resolving the dispute in Al-Malik’s courts.

5. Must Professor Jones obtain a license in order to share his research with his MOH colleagues?

Probably not. The research likely qualifies as “fundamental research” because it was conducted by scientists, and possibly students, at a university. It has also been published and shared broadly within a particular scientific community.
Figure 6: Useful Web Sites

Economic Sanctions
Anti-terrorist and other U.S. government lists: www.bis.doc.gov/ComplianceAndEnforcement/ListsToCheck.htm
Specially Designated Nationals (SDN) List: www.treasury.gov/offices/enforcement/ofac/sdn
OFAC Web site for information on sanctions: www.ustreasury.gov/offices/enforcement/ofac

Export Controls
Commerce Control List: www.access.gpo.gov/bis/ear/ear_data.html
“Know Your Customer” guidelines: www.bis.doc.gov/complianceandenforcement/KnowYourCustomerGuidance.htm

Anti-Boycott
U.S. Department of Commerce boycott forms, Form BIS 621-P or 6051-P: www.bis.doc.gov/antiboycottcompliance/boycottrequestreportingform.htm
U.S. Department of the Treasury international boycott form, Form 5713: www.irs.gov/formspubs/lists/0, id=97817,00.html

Foreign Corrupt Practices Act, Anti-Bribery
International Efforts Toward Financial and Programmatic Accountability
Aliza I. Sacknovitz and Jill W. Schamberger

In the following article, the authors address some financial and programmatic risks in conducting international collaborations under sponsored awards. Although the authors are speaking to colleagues in the federal offices of inspectors general, their comments could readily apply to research administrators. The authors write that in addition to the increase in the amount of federal support now funding awards involving international collaborations and an increase in the international nature of science, “This increase in domestic and international R&D activities brings with it a growing need for ensuring financial and programmatic accountability in areas such as use of research funds, integrity in research, and achievement of research programs’ stated goals.” These words could easily apply to research administrators, who share these concerns and responsibilities. The authors further discuss the kinds of things the OIGs look at, when investigating allegations of financial and programmatic misconduct. Given the difficulties often encountered in ensuring accountability with respect to foreign collaborations, the authors’ comments may additionally prove helpful. Footnotes in this article appear as Endnotes, see page 3520:29 –Ed.

Funding for research and development is increasing around the world. Offices of Inspectors General at federal research agencies, whose very mission is to ensure agency accountability for tax-payer dollars, must be particularly aware of the increasingly international nature of research, the ensuing accountability challenges, and the actions being taken to address these challenges.

From 2002 to 2004, R&D activities in the 30 countries that comprise the Organization for Economic Co-operation and Development grew from $657 billion to $726 billion.1 The U.S. government provided over $55 billion for R&D funding in 2007,2 and the National Science Foundation alone spends $300-400 million annually on research awards involving international collaborations.3

Also increasing is the international nature of science, with multi-national, cross-disciplinary research, not only common, but desirable. For example, a February 2008 report issued by NSF’s National Science Board stated that international science and engineering partnerships play a crucial role in promoting global prosperity by building S&E capacity and expertise around the world, energizing U.S. innovation, strengthening diplomacy, and fostering capacity building in developing countries.4

This increase in domestic and international R&D activities brings with it a growing need for ensuring financial and programmatic accountability in areas such as use of research funds, integrity in research, and achievement of research programs’

stated goals. The U.S. and other international research and governmental bodies must address these financial and programmatic challenges in order to preserve the integrity of, and tax payer confidence in, the research enterprise. The recent NSB report also advises that funding agencies and researchers consider accountability issues: “Accountability must be an integral part of planning successful collaborations to assure supporters that research integrity is a priority and that funds are used appropriately.” OIGs must collaborate to transcend traditional agency boundaries in order to better address challenges presented by global R&D endeavors. OIGs cannot continue to work under the status quo, but rather must communicate and cooperate amongst themselves and others. As a European Science Foundation report states, “Global communication and cooperation among accountability professionals is necessary to gain efficiency and produce timely, useful accountability information.”

Financial and Programmatic Accountability Transcends Borders

Accountability for Research Funds

OIGs at federal research agencies are responsible for ensuring that their agencies hold research award recipients accountable for the federal dollars they receive. Audit work focused on financial accountability and internal controls can help mitigate the risks of fraud, waste, and abuse. However, as OIGs are only too aware, accountability for federal research dollars is often lacking. For example, a series of audits the NSF OIG is currently conducting on time and effort reporting at institutions receiving NSF funding is illustrative of this deficiency. Findings include missing, incomplete, or inadequate documentation to support the accuracy of labor effort costs; salaries charged in excess of limits; and salaries improperly charged because the work did not directly benefit NSF awards. Such findings bring into focus both weaknesses with effort reporting and payroll systems, as well as institutions’ lack of compliance with their own internal policies.

Institutions receiving federal research dollars from any federal agency must have adequate accounting and internal control systems to track and manage their research awards. However, NSF OIG findings raise questions about the extent to which these control systems are operating properly. NSF OIG audits have identified concerns with institutions not effectively overseeing federal monies passed through to subrecipients; not having support for claimed cost sharing; and not separately accounting for direct and indirect costs to prevent duplicate charges, all of which place federal research dollars at risk.

Challenges in financial accountability also exist when research is conducted in other countries using U.S. funds. For example, an NSF OIG audit found many issues regarding the operations of an organization created by an international treaty agreement to coordinate and promote scientific research related to global change in the Americas. The organization’s operations and research programs are funded by voluntary contributions by 19 countries: NSF awarded grants totaling $16.4 million on behalf of the U.S. The NSF OIG found that the organization did not adequately manage its subawards and that it was not familiar with, or did not understand, its responsibilities for subaward monitoring activities as required by the NSF grant...
agreements. As such, it did not place a priority on monitoring or improving its oversight of subawards. In addition, the audit identified other accountability problems such as the premature draw down of funds, excess educational allowance payments that could have been put towards better use, and unallowable costs charged to the NSF grant. Effecting change to protect NSF’s investment was made difficult by the involvement of multiple countries in the governance of the organization.

Other NSF OIG audits of international research activities have also identified concerns about award recipients’ internal controls as well as the adequacy of NSF’s policies and procedures to monitor compliance with award terms and conditions. U.S. research agencies and their OIGs, therefore, cannot assume that research conducted overseas will be done within the accountability structures expected and/or required of U.S. institutions.

**Integrity in Research**

Ensuring financial and programmatic accountability includes the need for OIGs to ensure scientific integrity and prevent and address issues of research misconduct, which the 2000 Federal policy defines as fabrication, falsification, and plagiarism. In so doing, OIGs not only protect the federal funds used to conduct research, but also maintain the trust of the American people in the research that their tax-dollars fund. Recent headlines and studies suggest that the research community is plagued with cases of RM, some of which receive high profile coverage. It is therefore even more crucial that U.S. research agencies and their OIGs take allegations of RM seriously and hold researchers accountable for maintaining integrity in their research.

However, ever increasing multinational, cross-disciplinary research presents unique challenges for investigating RM allegations. In such cases, RM investigators are often no longer dealing exclusively with U.S. researchers located at U.S. institutions. Rather, allegations may involve examining foreign researchers collaborating with U.S. researchers, but employed at a foreign site not governed by the federal policy. In such cases, RM investigators often must identify who to contact to coordinate an international investigation, which itself can be difficult. Next, RM investigators must determine whether the research entity has an RM policy and, if so, how that policy differs from the federal policy. Oftentimes, RM investigators quickly learn that, unlike the U.S., many other countries, including some major sponsors of research, do not have a formal RM policy. Or, RM investigators realize that the differences within and between national policies themselves create practical challenges.

NSF OIG, as well as other research funding agencies, have already faced some such challenges. In one case, NSF OIG received an allegation related to a project intended to facilitate collaboration between a U.S. and a non-U.S. researcher. The foreign researcher denied participating in the project and the U.S. researcher could not provide evidence of the collaboration. After initially assisting in the investigation, the foreign researcher suddenly stopped acknowledging NSF OIG emails and refused to cooperate further. NSF OIG was thus unable to pursue investigative action against the U.S. researcher.

As international collaborative research continues to thrive such scenarios are
bound to continue. While overall OIGs at federal research agencies are aware of the
need to ensure integrity in research,13 OIGs are only beginning to explore the need
for mechanisms for investigating international RM.

**Evaluation of Research**

Assurances regarding the integrity of the finances and the conduct of research
must also be accompanied by assurances that research programs have attained
their stated goals. Evaluations of research programs provide a means to obtain such
assurances and, in so doing, also inform funding agencies and stakeholders about
programmatic outcomes.

Evaluating basic research poses challenges recognized by funding agencies
around the world. One challenge is the difficulty in determining what programmatic
impacts and outcomes should be measured (e.g., economic, field of study, etc.).
Another challenge is that programmatic impacts and outcomes may not be known
until many years in the future. However, such challenges do not mean that evaluations
of basic research should be avoided.

U.S. and foreign funding agencies have approached these challenges differently.
NSF, for example, currently relies on a variety of activities to ensure that the best
science proposed is funded, and that this research contributes to the goals of the
scientific program and the agency overall. Most NSF awards are subject to merit
review, whereby panels of external experts review research proposals and recom-
mend to NSF which proposals should be funded. After individual awards are made,
NSF then relies on a variety of evaluation committees14 to provide a retrospective
assessment of whether the projects funded furthered the research program as well
as the agency’s goals. Nonetheless, NSF has not systematically built evaluations into
all of its programs, nor does it have a central office that can assist programs in plan-
ning and conducting evaluations. NSF instead relies on its various directorates and
programs to consider and commission evaluations at their own discretion.

In contrast, the Deutsche Forschungsgemeinschaf, Germany’s main funding
agency for basic research, has embarked on a more systematic approach to evalua-
tion. Until 1990, the DFG relied on its different departments to commission evalu-
ation studies for different programs whenever they were deemed necessary; there
was no single office for overseeing evaluations. In 1999, the DFG implemented a
more systemic and professional approach to evaluations. The organization began
placing emphasis on the concept that the results of evaluation studies would be
used in the development of research plans and research policy. The Information
Management Unit (IM Unit) is now mainly responsible for evaluation studies. Act-
ing as a service provider to other DFR units, the IM Unit offers advice on conceptu-
alizing the study, drafting a request for proposals, selecting a contractor, and assist-
ing with implementing the contract.15

OIGs need to be aware of how research funding agencies in different countries
are taking on the challenge of evaluating the outcomes and impacts of the research
they fund. Such knowledge can inform OIGs in assessing the effectiveness of their
own agency’s approaches to evaluating research programs. Audit work that consid-
ers how information about research results is collected and used internationally can help identify promising practices that can strengthen their own agency’s domestic operations.

**International Accountability Activities**

As the previous examples show, U.S. research agencies are not alone in facing multiple challenges to financial and programmatic accountability. A variety of recent international activities have brought together decision-makers and practitioners to address these challenges by exchanging strategies and experiences and building upon their collective knowledge.

**Accountability for Research Funds**

European research funding agencies, the European Science Foundation, and the NSF OIG have co-sponsored a series of annual workshops to address accountability in research activities. Beginning in 2003, these workshops have focused on issues such as audit practices and compliance monitoring, oversight strategies, and evaluating and managing risk. These workshops typically include about 40 participants from 15 countries. The participants are mainly those who are responsible for the administration and audit of government-funded S&E research programs. These meetings provide a forum for discussing individual countries’ practices for addressing various accountability challenges, and a starting point for developing international approaches to address them.

**Integrity in Research**

Research misconduct is also receiving international attention. The Global Science Forum of the Organization for Economic Co-operation and Development established the Co-ordinating Committee for Facilitating International Research Misconduct Investigations to focus on practical issues related to international RM investigations. This expert group was created in response to an OECD Report developed following a February 2007 meeting in Tokyo to address scientific integrity and misconduct. The document discussed the significance and impact of RM, the international diversity of principles and procedures for dealing with RM allegations, and the possible causes and contributing factors. Among other things, it recommended that “Interested countries … undertake an international dialog among national practitioners.” NSF IG, Dr. Christine Boesz, and Executive Vice-President of the Natural Sciences and Engineering Research Council of Canada, Dr. Nigel Lloyd, are co-chairing the expert group.

The committee has convened two times. At its inaugural meeting in December 2007 at NSF in Arlington, Virginia, 16 participants representing 14 countries and international bodies discussed various approaches for coordinating investigations of and resolving RM allegations. They agreed to develop principles regarding international RM investigations. They also discussed developing generic models of misconduct-related documents and agreements to be signed at the onset of international research collaborations. Lastly, the committee recommended broadening its membership in order to better reflect the diversity of international research and its systems. Overall,
the meeting served as a means of opening a dialogue between nations.20

These topics were advanced during the committee’s second meeting in April 2008 in Paris. At this meeting, 25 participants from 21 countries and international entities further discussed issues raised at the first meeting.

Specifically, participants reviewed draft documents of the principles for facilitating international RM investigations and generic templates of misconduct-related documents for inclusion in international agreements.

They also discussed the target groups for dissemination of these documents once finalized.

The committee’s next and last meeting will occur in September 2008 in Vienna. Participants are expected to finalize a document containing the principles of international RM investigations and the generic templates of misconduct-related documents. The committee will also discuss its communication strategy for disseminating its work, which will include a practical manual on how to approach misconduct cases in international research collaborations.

Other international integrity efforts show the broad nature of these concerns. The ESF and the U.S. Department of Health and Human Services Office of Research Integrity organized a World Conference on Research Integrity in September 2007 in Lisbon.21 According to the conference’s final report,22 this conference “was the first global forum convened to provide researchers, research administrators, research sponsors, journal editors, representatives from professional societies, policymakers, and others an opportunity to discuss strategies for harmonizing research misconduct policies and fostering responsible conduct in research.” The number of attendees — 275 participants from 47 countries — and their diverse professional backgrounds indicate the widespread interest in these issues.23

**Evaluation of Research**

Finally, evaluating research is also being discussed at the international level. The ESF is leading a forum for member organizations and others to develop and address approaches for evaluating research projects and programs. The forum’s focus is on post-award evaluations, such as whether the research project or program achieved its stated goals. To date the forum has sponsored two meetings, each attended by approximately 40 representatives from research funding agencies, research performing organizations, and learned societies from over 20 countries. The workshops have provided a platform for sharing current practices and experiences in evaluating research. Presentations have included evaluation approaches used by institutions that conduct research, case studies of quantitative indicators used in ex-post evaluations, the comparability of evaluations and indicators across disciplines and countries, and how progress and final project reports can be used in ex-post evaluations.

The forum’s next workshop will occur in October 2008 in Vienna. The objective of this meeting is to produce a set of documents that will describe state-of-the-art practices in ensuring quality in evaluations of research programs, as well as a set of common European indicators in evaluating organizations performing research.
Conclusion

The efforts described above are only a start in addressing the variety of financial and programmatic accountability challenges faced worldwide. In working together, nations will have to recognize that their financial systems, their national RM policies, and their approaches to evaluating research differ in many, often significant, ways. In creating internationally recognized policies and practices the cooperation and participation of funding agencies, institutions, and the researchers themselves is essential.

In this time of more complex international issues such as global climate change and public health, global research is more important than ever. As research becomes more international, OIGs at research agencies must be well-informed of the accountability efforts being undertaken around the world. Their oversight responsibilities for monitoring and evaluating research agency operations will confront additional challenges as the number of international collaborations grows. OIGs must therefore ensure that their agencies implement adequate controls to ensure the financial and programmatic risks associated with these international endeavors are considered and addressed.

ENDNOTES

1 National Science Foundation (NSF), Division of Science Resources Statistics, S&E Indicators 2008, (NSB-08-01), Arlington, VA, January 2008.
3 U.S. House of Representatives, Committee on Science and Technology’s Subcommittee on Research and Science Education, Subcommittee Supports a Coordinated Effort to Advance International S&T Programs Among Agencies, Washington, DC, April 2, 2008.
5 Ibid.
9 Executive Office of the President, Office of Science and Technology Policy, 65 FR 76260-76264, Federal Policy on Research Misconduct, Washington, DC, December 6. 2000. The policy instructed federal agencies that support or conduct research to implement it within one year. NSF was one of the first agencies to implement the federal policy in 2002 (45 CFR
Part 689).


12 This case is similarly detailed in a nature article co-authored by NSF IG Dr. Christine Boesz, entitled “Investigating international misconduct,” April 10 2008.

13 The interest of OIGs in ensuring research integrity is evident, among other things, by IG membership from over 20 federal agencies in the PCIE/ECIE Misconduct in Research Working Group, which began in 2001. NSF IG Dr. Christine Boesz chairs this working group and can be contacted by those seeking additional information about its activities.

14 Committees of Visitors consist of a panel of external experts that evaluate the integrity and efficiency of the proposal review processes and provide a retrospective assessment of the quality of the results of the projects funded. NSF requires that its research programs receive such a review every 3–5 years. The Advisory Committee for GPRA Performance Assessment is comprised of external experts from the research fields NSF funds. The Committee meets annually to review the NSF-wide portfolio of projects to determine whether the agency has made progress towards meeting its strategic goals.

15 European Science Foundation Member Organization Forum “Evaluation of Funding Schemes and Research Programs,” October 22-23, 2007, Berlin, Germany. Abstract of DFG presentation on research evaluation, and abstracts of other presentations, were provided via email to conference participants prior to the meeting. Presentations from the meeting can be found at http://www.esf.org/activities/mo-fora/evaluation-offundingschemesandresearchprogrammes/moforumevaluationworkshop10-2007.html. Downloaded June 26, 2007.


17 For more information about OECD GSF, visit http://www.oecd.org/document/60/0,2340,en_2649_34319_1813628_1_1_1_1,00.html.

18 The OECD report can be found at http://www.oecd.org/dataoecd/37/17/40188303.pdf.


20 For further information regarding the expert group and its first meeting, see Drs.


23 In addition to multinational efforts, individual countries are also taking steps to ensure research integrity. In China, for example, these activities are being undertaken by multiple national organizations. The China Science Foundation now publicizes names of scientists who conduct RM; the Ministry of Science and Technology created an office in to handle RM cases; and the Chinese Academy of Sciences now requires all of its institutes to establish scientific ethics committees. (See “China Science Foundation Takes Action Against 60 Grantees,” *Science*, September 16, 2005; “China sets up rules to combat scientific misconduct,” SciDev.net, November 13, 2006; and “CAS takes aim at misconduct,” www.chinaview.cn, February 27, 2007).
Examining RCR Issues in International Collaborations
Sandra Titus, Ph.D., Office of Research Integrity

The Government-University-Industry Research Roundtable (GUIRR) of the National Academies of Sciences (NAS; Washington, DC) recently hosted a workshop on July 26-27 entitled “Examining Core Elements of International Research Collaboration.” The central aim of the workshop was to explore the role of government, industry, and academia in promoting better cross-border and interdisciplinary research collaborations.

Key speakers discussed issues relevant to understanding and enhancing cross-border and interdisciplinary research, including cross-cultural and ethical issues, research integrity, financial risk, export controls, the role of intellectual property, and diplomacy. One workshop session specifically focused on research integrity and the responsible conduct of research (RCR), highlighting key issues fundamental to promoting and ensuring data integrity in international research collaborations. This article is based on my interpretation and impressions of that session.

Researchers are increasingly involved in international collaborations. However, as Dr. John Kirkland, Deputy Secretary General, Association of Commonwealth Universities, London, pointed out, before that begins, one must know the infrastructure and consider the differences that are present in the culture, the ways research is conducted, the institutional structure that supports the researcher, and the economic incentives for researchers and institutions. There is a growing awareness from current international researchers that research standards for data collection and management may encounter serious problems that can impede and limit successful research efforts.

Researchers who worked with collaborators in other countries described their experiences and mechanisms for promoting data integrity. One key element stressed by attendees was the importance of taking the time to thoroughly train and then continually monitor team members.

While international collaborations may appear to open doors to additional research opportunities, many speakers stressed giving careful consideration to what one is trying to accomplish and evaluating what one’s potential collaborator is trying to accomplish. One must consider motivations and have a good rationale for why one plans to work with a certain individual or center.

Speakers also highlighted the need to have a clear understanding of the cultural context as well as a formal written agreement before beginning the research. Such agreements should happen long after trust has been established and individuals and institutions know and understand each other’s goals. The following lists of issues are a summary of the committee discussions and presentations made by Drs. David Resnick (National Institute of Environmental Health Sciences), William Blattner

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Specifically, agreements should include the following objectives:

- To specify tasks
- To specify authorship and intellectual property
- To describe financial issues
- To describe a dispute resolution process and termination provision

The discussion focused on what might be done to enhance training and international collaborations in the United States. A course or courses could be developed to help domestic researchers who work on international collaborations understand and discuss the objectives listed above.

Moreover, since data integrity is one desired objective, many participants noted that there is a need for additional training and rules that offer an assurance of data integrity. Industry is often far ahead of academia in knowing how to assure data integrity, specifically in the pharmaceutical area, because they are required to follow the Food and Drug Administration’s (FDA’s) Good Clinical Practice rules (www.fda.gov/ScienceResearch/SpecialTopics/RunningClinicalTrials/default.htm).

Future discussions with representatives from various industries might also provide additional information on how to adapt and translate some of the data integrity standards from industry to academia and to researchers.

Finally, participants noted the need for the government to expand and alter their role in promoting and regulating data integrity in the international arena. These include the following guidelines:

- Regulatory approaches should be altered to be applicable to modern research operations.
- Online courses can be a valuable component of RCR education and training, but should not be the sole mechanisms used.
- Institutions and agencies should be required to invest real resources in monitoring and enforcing existing RCR requirements.
- Institutions should be directed to ensure that every researcher conducting international research receives RCR training that addresses international issues.
- Institutions and agencies should be required to develop better systems of data stewardship and transparency.

Participants also hoped that the ideas promoted through the presentations and discussions could lead the NAS GUIRR [National Academy Science Government-University-Industry Research Roundtable] to

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**Help from NSF**

NSF has a dedicated research integrity Web page, www.nsf.gov/od/oise/intl-research-integrity.jsp. The agency has said it will continue to focus on international issues, as it develops further resources on responsible conduct of research.
convene a larger meeting to further explore and advance the issues involved in international research collaborations as well as provide an impetus for bringing about necessary changes.

Additional information about this particular project may also be viewed online on the GUIRR Web site at www.nas.edu/guirr.
International Agreements: What Makes Them Different and Not so Different

Pat Hawk, Oregon State University

Throughout my career, I’ve worked with international agreements from different perspectives. I’ve been a departmental administrator, a federal extramural projects specialist, and a contracting officer in a central administrator’s role. While my roles have been different, here are some of the lessons I’ve learned.

Budgeting Can Be Tricky
We may have to deal in foreign currency, so make sure you have your allowable/appropriate costs included and calculated for US dollars. There may be less “cushion” with changing exchange rates. Also be aware that there may be costs you should include, but do not normally see, in our everyday projects. Doctoral Dissertation Research Abroad projects are a perfect example of where I first saw those unusual budget items called “informant’s fees.” This budget item was used to describe translators, local guides, and sometimes gifts for those individuals the student might be meeting. Once I understood what that “gift” was, a very common way of saying “thank you for your time,” I didn’t see it much different from a McDonald’s gift card we might give to a human subject participant.

Negotiating Can Be Tricky
Negotiating any agreement can be challenging. Regardless of the sponsor, we have to make sure we follow our institutional policies and procedures; for public universities, state law may play a bigger part. In Oregon, our state law prevents us from accepting certain clauses such as binding arbitration (it creates contingent debt). We always check to make sure the entity/entity’s country of origin is not “on the bad side” of any Office of Foreign Assets Control (OFAC) lists. I dare say governing law is always interesting for all of us, but I think of time zones as my biggest challenge. When negotiating an agreement with someone in Vienna (Austria), I was coming into work at 5:30 in the morning so that I could reach them at the end of their work day. While e-mail is a great tool, I’ve found—just like with many industry agreements—a telephone call can sometimes be the best negotiating tool.

Award Management Can Be Tricky
As mentioned earlier, we may have to report and bill our costs in foreign currency. Exchange rates vary daily, so make sure you always check them. But just like any award, I know that if we have (1) budgeted correctly and proposed a clear description of work to be performed and (2) negotiated a good agreement (including payment terms), then award management goes much more smoothly. I would much rather get everything in the best possible shape before award set-up.

1 This article is reprinted from the NCURA Magazine, Vol. XLII, No. 1, January-February 2010, published by the National Council of University Research Administrators. It is used with permission of the publisher.
There are other aspects of award negotiation and management that can be confusing in our global economy. Just what is an international agreement in our world today? Is it an agreement with an organization located overseas, or is it more than that?

As a good example, we’re currently negotiating an agreement with a U.S.-based oil company that has global operations. While it’s very exciting to work with a global enterprise, it brings up a whole new set of questions. While our primary contact is located in the U.S., the branch providing the funding is not. The agreement is asking us to follow governing law in a foreign country because the particular branch is not in the U.S. Even though it’s a U.S.-based company, following the laws of another country makes it tricky. The logistics of negotiating is a challenge as well. Again, our contact is in the U.S., but permissions need to come from the legal counsel in the office that has a 14-hour time zone difference. Luckily, our time zone difference with our foreign counterpart is a mere fraction of that difference.

This project gets even more interesting because the project involves migrating whales. While our work this year will keep us within U.S. waters for the most part, we may have to go into Canadian waters. Just to be sure, we will get all of the proper permits; if our Principal Investigator has to continue his work during the winter months, he will also likely need permits from Mexico. Next year, our Principal Investigator may be heading west. Then I suppose we’re working in international waters.

What about a project funded by a U.S. organization, but the work takes place overseas? I have very fond memories of an award supporting an archeological dig in Italy from my days at the University of Virginia. It was fascinating, and our regulatory world was a lot simpler then; however, there were still many hurdles to face—travel advances, travel vouchers, bringing home soil samples. A lot of permissions were asked for and received in order to perform this project. Good planning was critical.

We currently have a very large project from the U.S. Agency for International Development. Our Principal Investigator leads a multimillion dollar, multi-institution effort to help improve aquaculture in developing countries. This project requires a lot of local assistance and we even write subawards to international governments. While it sounds a little scary, I think the project has gone very well. We have been able to successfully negotiate these subawards, and successfully manage the awards. Again, good planning was critical.

As a federal extramural projects specialist at the U.S. Environmental Protection Agency, I only dealt with a few international agreements. However, these agreements required additional approvals, some even going to the U.S. Department of State. Once again, good planning and good documentation was very important to obtaining the necessary approvals to get those awards made. My philosophy has always been to put a proposal, a funding package, or an agreement with the clearest information, the best justifications/ documentation possible. It takes the focus to the right place — the science — and makes approval/acceptance so much simpler.

After thinking about these issues—budgeting, negotiating, awarding and managing — I believe that international agreements are more similar to domestic agree-
ments than we commonly think. Keeping this in mind helps make international agreements a bit less intimidating.

About the Author

Patricia Hawk is the Director of the Office of Sponsored Programs at Oregon State University. Pat has been involved in research administration for more than 26 years. She began her career as a research administrator in the Office of the Associate Provost for Research at the University of Virginia. Pat has also worked at the U.S. Environmental Protection Agency’s Office of Research and Development, and returned to the university research community first at the University of Oregon and Oregon Health and Sciences University before her employment at Oregon State University.
3520.5 The Seventh European Framework Programme Comes to an End: What Was it About and Why Should U.S. Researchers Cooperate Now?¹
Elli Tzatzanis-Stepanovic, Austrian Research Promotion Agency (FFG)

Competition has been shown to be useful up to a certain point and no further, but cooperation, which is the thing we must strive for today, begins where competition leaves off.

Franklin D. Roosevelt

International relations between the U.S. and Europe have a long history and are backed by several Declarations and Agreements. After years of competition the U.S. is more than willing to cooperate with the rest of the world, especially with Europe. Half of the world’s GDP and one third of world’s trade are created by EU-US transatlantic cooperation. In order to tackle global societal challenges transatlantic S&T cooperation has to play a stronger role. The Seventh European Framework Programme (FP7), which will be replaced by ‘Horizon 2020’ in 2014, is encouraging transatlantic S&T teams to submit joint research proposals. European project consortia with U.S. participation have higher success rates and U.S. partners are provided partial funding for such proposals.

EU–U.S.: Competition or Cooperation?
The first formal cooperation between the EU and the U.S. in the area of S&T cooperation took place in 1990 with the Transatlantic Declaration. In 1995 the New Transatlantic Agenda provided the foundation for this relationship.

Cooperation in competition matters has been taking place for 20 years, regulated by the EU/US Competition Cooperation Agreement of 1991, which foresees, among other aspects, regular exchange of information on current enforcement activities and priorities, on policy regulations and other matters of mutual interest. The EU/U.S. Positive Comity Agreement followed in 1998 and the Administrative Arrangement on Attendance in 1999. In 2002 the EU and the United States agreed on best practices on cooperation in merger cases which were updated and revised in 2011.

As recognition that science and technology contribute significantly to economic growth and quality of life, the EU and the U.S. concluded a Science and Technology Cooperation Agreement in 1998 which was renewed in 2004 underlying the importance of the on-going transatlantic research dialogue. Transatlantic research cooperation is one piece of many within the Seventh Framework Programme for Research and Technological Development, the European Union’s main instrument for funding research. It is nevertheless an important one. Although FP7 will come to an end in 2013, the last round of Calls to be opened in July 2012 is said to become the most significant for bridging the gap to the next Framework Program for Research and Technological Development, Horizon 2020, which will start in 2014 and end in 2020.

¹ This article is reprinted from the NCURA Magazine, May/June 2012, Volume XLIV, No. 3, published by the National Council of University Research Administrators. It is used with permission of the publisher.
The ‘Cooperation’ Programme in FP7

The European Framework Programme represents only a small portion of total R&D investment in Europe, but it is a key element in providing a basis for strategic coordination and cooperation and therefore better utilization of resources. FP7 is structured into four so-called Specific Programmes which reflect the four major areas that are being funded by FP7. Cooperation among researchers is funded within the ‘Cooperation’ Programme and excellent ideas are funded in the ‘Ideas’ Programme from the European Research Council. Carrier development and mobility of researchers is funded in the ‘People’ Programme and the building of different research capacities is funded in the ‘Capacities’ Programme.

With more resources than in the previous Framework Programme (FP6) and more open to international cooperation, FP7 was and is open for U.S. partners throughout all research topics of the Specific Programme ‘Cooperation,’ supporting all types of research activities carried out by different research bodies in transnational cooperation. The ‘Cooperation’ Programme is sub-divided into ten distinct themes, reflecting the most important fields of knowledge and technology where research excellence is particularly important to improve the ability to address social, economic, public health, environmental and industrial challenges of the future.

**Figure 3520.5-1. Thematic Distribution of US Participants (in contracts signed)**

The ‘Cooperation’ Programme, together with the ‘People’ Programme, so far has been the most attractive for U.S. organisations joining research activities within FP7. U.S. participation in the Cooperation Programme was dominated by higher education institutions, totalling 61.4% of all proposals. From January 2007 to December 2010 a total number of 1,118 U.S. organisations have been included in the submission of 868 proposals, with a success rate of 19.2% involving 215 U.S. participants.

The thematic distribution of U.S. participation in FP7 shows that almost one third of EU-U.S. cooperation in FP7 takes place in health research. Since 2008, the U.S. National Institutes of Health (NIH) and FP7 have offered reciprocal opportunities

KBE = Knowledge Based Bio Economy; ICT = Information & Communications Technology; NMP = Nanotechnologies, Materials and new Production Technologies; SSH = Socio-economic Science and Humanities
for participation and funding aimed at fostering transatlantic research cooperation in health and smarter competition in science. Setting an example for research cooperation in other areas of research, pursuing mutual interests in S&T cooperation needs a strategic orientation and pragmatic steps.

**Transatlantic S&T Cooperation Wanted Now**

Although the international dimension of FP7 laid the groundwork for increasing U.S. participation, it is still low and there is a huge potential for improvement. An important structural difference that could be an obstacle to a complete understanding of Framework Programmes and their importance is that in the U.S. research is directed mainly by a principal investigator (PI). Cooperation is usually not a required component in U.S. funding, meaning that funding is mainly given to individuals and not to teams. This is very different compared to the Framework Programmes. Additional efforts are needed to create greater awareness in the U.S. of opportunities for EU-U.S. S&T cooperation within FP7.

There are many reasons why U.S. researchers should participate in the last round of FP7 Calls to be open as of July 2012, but the following seven would persuade most researchers:

1. **Funding Budget is High**
   The last round of FP7 Calls will become the largest ever with respect to available funds. In general, the EU budget for U.S. researchers is accessible if certain conditions are met.

2. **Transatlantic Cooperation is Stimulated**
   Collaborative research is encouraged within FP7 aiming at establishing excellent research projects and networks able to attract researchers and investments. Tackling global challenges and addressing more ambitious problems become easier through international cooperation where mutual interest exists. Clear provisions foreseeing the integration of entities established in the U.S. may be included in the work programme/call for proposals, such as the upcoming work programme in Health or Socio-economic Sciences and Humanities.

3. **Participation in FP7 is Simple**
   Participation for U.S. partners in FP7 research consortia is simple. The role of European research project coordinators is to guide partners, support them during the project proposal phase, and to manage the project during project life cycle. In addition, the Participant Portal has become the European Commission’s single authoritative website for the publication of FP7 calls, organisation registration, all project related services and all FP7 related legal and guidance documents.

4. **Timing is Good**
   Now is the best time to reactivate research networks, reshape research ideas and get started: the last round of FP7 Calls opens in July 2012. It offers a good opportunity
for U.S. researchers to secure partial funding of their research by FP7. The new Science, Technology and Innovation Programme, Horizon 2020, will start in January 2014 creating a gap between the two research funding programmes.

5. Re-submission is Encouraged
It is common that most research project proposals become successful when being submitted the second or third time! Re-submission of proposals is encouraged by the European Commission giving the research consortium enough time to complete, review and adapt the research project proposal to the current work programme. It is fact that project consortia with U.S. participation have a higher success rate!

6. Established European Networks are available
During the lifetime of FP7, numerous European Networks have been established and a number of research consortia have been dealing with research on European scale and several teams have been successful. Finding an existing research consortium is easier than ever! The European Commission also offers online partner search services.

7. BILAT-USA and Link2US are supportive
The projects BILAT-USA and Link2US, funded by the EC under FP7, support the enhancement and development of transatlantic S&T partnerships. All relevant services and information offered can be found under www.EuUsScienceTechnology.eu

One does not have to believe that transatlantic cooperation under FP7 per se is easy. One cannot deny the distance, and cooperation needs team spirit. One has to become very familiar with the participation rules and administrative procedures of FP7. Here the European research consortium plays an important role which gives support and guidance to U.S. partners. When asking U.S. partners in FP7 research consortia what the main reasons for their transatlantic cooperation are, they mostly cite the establishment of a wider cooperation network, access to specific expertise, and improvement of scientific excellence. This sounds worth an experiment!

References
BILAT-USA Analysis of Existing Instruments, Regulations and Obstacles for U.S. participation in FP7 (2011).


About the Author

Elli Tzatzanis-Stepanovic is an FP7 Senior Expert in International Cooperation at the Austrian Research Promotion Agency (FFG). She is Project Manager of the FP7 project BILAT-USA, which together with the complementary project Link2US aims to raise awareness towards EU-US S&T cooperation.
Practical Tools Page 3530:1

Practical Tools

This section includes practical guidance and tools — charts, checklist, etc. — for use in overseeing international research collaborations. This material is culled from a variety of authoritative sources.

Useful References

AIS editors

Web Resources

◆ Country and City Dialing Codes. Maintained by AT&T, this site provides a listing of country and city codes and requirements for dialing internationally. Link: www.business.att.com/bt/access.jsp?c=a.

◆ Currency Converter. This is a multilingual currency converter for a host of international currencies. Link: www.oanda.com/converter/classic. Also see the “universal currency converter” site at www.xe.com/ucc.


◆ International Travel. The U.S. State Department maintains an extensive site providing official visa requirements for foreign destinations and per diems and travel warnings for various parts of the world. Link: www.state.gov/travelandbusiness.

◆ Time Converter. This is a good site for determining the current time for cities around the world. Link: www.timeanddate.com.

◆ Translators (online). This site provides straightforward, online translation of words, phrases, or sayings in multiple languages. Link: http://babelfish.altavista.com/translate.dyn.

Select Federal Funding Opportunities

◆ U.S. Agency for International Development (USAID) (www.usaid.gov). USAID is an independent agency that serves under the “direct authority and foreign policy guidance” of the Secretary of State. USAID is responsible for most bilateral development assistance — including economic growth, global health, and democracy programs — and food assistance programs. There are many opportunities for the involvement of institutions of higher education.

◆ Department of Health and Human Services (HHS)/National Institutes of Health (NIH). The NIH center or institute that exclusively promotes and fund international collaborations is the Fogarty International Center (www.fic.nih.gov). The center supports a variety of international research and related programs. HHS allows for the inclusion of a foreign component on NIH grants with prior approval. During the
proposal submission process, applicants are required to identify consortium partners as either domestic or foreign. If an application involving a foreign component is considered for funding, the requirement for approval of the foreign subrecipient will be addressed at that time. HHS defines a “foreign component” as performance of any significant element or segment of the project outside the United States either by the grantee or by a researcher employed by a foreign institution, whether or not grant funds are expended. HHS states that the justification for the inclusion of a foreign component must present special opportunities for furthering research programs through the use of unusual talents, resources, populations, or environmental characteristics that augment existing U.S.-based resources. An HHS Grants Policy Statement (www.hhs.gov/grantsnet/adminis/gpd) provides a summary of policy requirements applicable to domestic grants with a foreign component. With two exceptions — the American University of Beirut, which is not considered a foreign organization, and the World Health Organization — foreign indirect costs will not be reimbursed.

◆ **National Science Foundation (NSF)** (www.nsf.gov/funding/browse_all_funding.jsp). The NSF is an independent federal agency created “to promote the progress of science.” The basic mission of the NSF is to fund and advance independent research within the U.S. scientific and engineering community through competitive grant awards based on merit review of proposed projects. NSF normally does not fund foreign organizations directly; it does make awards to U.S. organizations that include in their projects foreign subawards. A foreign entity receiving NSF funds would only be eligible for direct costs, unless the foreign entity has a previously negotiated facilities and administrative rate agreement with a U.S. federal agency.

◆ **National Aeronautics and Space Administration (NASA)** (www.nasa.gov/about/research/index.html) NASA as a policy generally does not support research with foreign organizations conducted through grants or cooperative agreements. However, it does encourage undertaking collaborative projects involving international scientific efforts through an international agreement with NASA on a no-exchange-of-funds basis (see NASA FAR Supplement (NFS) 1835.016-70 (www.hq.nasa.gov/office/procurement/regs/nfstoc.htm)). The direct purchase of supplies and/or services, which does not constitute research, from non-U.S. sources by U.S. award recipients is permitted.

◆ **Department of Agriculture (USDA).** The USDA offers some limited programs that support international research partnerships through its International Science and Education Competitive Grants Program (ISE) competitive grants program and Foreign Agricultural Service (FAS). The ISE supports research, extension, and teaching activities that will enhance the capabilities of American colleges and universities to conduct international collaborative research, extension, and teaching. ISE projects are expected to enhance the international content of curricula; ensure that faculty work beyond the United States and bring lessons learned back home; promote international research partnerships; enhance the use and application of
foreign technologies in the United States; and strengthen the role that colleges and universities play in maintaining U.S. competitiveness. Link: www.csrees.usda.gov/fo/educationinternationalscience.cfm. FAS offers a range of technical assistance, education, and outreach programs for emerging markets and developing countries that are designed to support the development of science-based regulatory policies and promote food security. Link: http://www.fas.usda.gov/aboutfas.asp.

◆ Department of Energy (DOE). While DOE, through its Office of Science (www.sc.doe.gov), is supportive of large projects involving multiple countries collaboratively working toward the advancement of plasma science and nuclear energy, support for small-scale collaborative projects involving international partners is infrequent. The agency sponsors a research and technical support program, called the Work For Others (www.cio.energy.gov/documents/OthersCradas.pdf), that provides assistance to organizations for activities that are not associated with the U.S. federal government.

◆ Environmental Protection Agency (EPA). EPA allows for the inclusion of a foreign subrecipient award in EPA awards. EPA’s Office of International Affairs (www.epa.gov/international/index.html) is responsible for acting on requests and for granting EPA consent for subawards involving any work to be performed in a foreign country or any work to be performed in the United States by a foreign recipient or international organization.
Suggestions for General Terms for Foreign Subawards

AIS editors

The FDP has developed a “Checklist of Additional Terms and Conditions to Be Considered for Foreign Subawards” (www.thefdp.org/checklist_foreign_subaward.doc). It cautions institutions when using the checklist to “consult appropriate campus officials to make sure the subaward you prepare meets your institution’s and the project’s requirements, and any special terms & conditions specified by the sponsor in the prime award.”

The FDP terms and conditions are reproduced below:

- **Use of Name:** Neither party shall use the name of the other party, nor the name of any faculty member, employee, or student of the other party, in connection with any product, service, promotion, news release, or other publicity without the prior written permission of the other party and, if an individual’s name be concerned, of that individual.

- **Publications:** Collaborator agrees that all publications that result from work under this subaward will acknowledge that the project was supported by (Award #), (Sponsor Name).

- **Governing Language:** In the event that a translation of this Agreement is prepared and signed by the parties, this English language version shall be the official version and shall govern if there is a conflict between this English language version and the translation. All disputes [litigation and arbitration] under this Agreement shall be resolved and conducted, regardless of the means or authority, in the English language.

- **Governing Law:** This Agreement shall be governed, construed and enforced for all purposes in accordance with the laws of [specify], without regard to such laws governing choice of law. Notwithstanding the foregoing Collaborator acknowledges that University is subject to the laws of the United States and will not be obligated to take any action that is violative of such laws.

- **Patents:** Pursuant to Public Law 96-517, as amended by Public Law 98-620, title to any invention or discovery made or conceived under this subaward shall vest in the Collaborator. Collaborator shall promptly notify Principal Investigator (as shown in Attachment 3) in writing of any such inventions or discoveries. Collaborator hereby grants to University a royalty-free, non-exclusive license for internal research purposes to any Collaborator invention or discovery.

- **Anti-terrorist Compliance:** Collaborator hereby agrees that all funds, including sub-awards to subrecipients, will be used in compliance with all applicable United States anti-terrorist financing and asset control laws, regulations, rules and executive orders.

- **No Partnership/Joint Venture:** The relationship of the Parties under this Agreement is that of independent contractors and they are not agents, employees, partners or joint ventures of one another. No Party has the authority to bind any
other Party in contract or to incur any debts or obligations on behalf of any other Party, and no Party (including any employee or other representative of a Party with responsibility for [Program] matters) shall take any action that attempts or purports to bind any other Party in contract or to incur any debts or obligations on behalf of any other Party, without the affected Party’s prior written approval.

◆ Export Controls: It is understood that University is subject to United States laws and regulations controlling the export of technical data, computer software, laboratory prototypes and other commodities, and that its obligations hereunder are contingent on compliance with applicable U.S. export laws and regulations (including the Arms Export Control Act, as amended, and the Export Administration Act of 1979). The transfer of any such Technology and Items and the entering into and provision of such Transactions and Services that are subject to Restrictions may require a license or authorization from the cognizant agency of the United States Government, and/or may require written assurances by the receiving party that it shall not re-export such Technology and Items to certain foreign destinations and/or to certain recipients without prior approval of the cognizant government agency, and/or may require that the involved individuals and entities will comply with conditions on Transactions and Services. While University agrees to cooperate in securing any license which the cognizant agency deems necessary in connection with this Agreement, University cannot guarantee that such licenses will be granted.

The FDP also makes available at its Web site (www.thefdp.org/Subawards_Forms.html) the following subaward template from the National Institutes of Health, included as Figure 3530.3-1.
## Figure 3530.3-1: NIH Foreign Subaward Agreement

### Foreign Subaward Agreement

<table>
<thead>
<tr>
<th>Institution/Organization (&quot;University&quot;)</th>
<th>Institution/Organization (&quot;Collaborator&quot;)</th>
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<th>Awarding Agency</th>
<th>CFDA No.</th>
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<tr>
<th>Subaward Period of Performance</th>
<th>Amount Funded this Action</th>
<th>Est. Total (if incrementally funded)</th>
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</table>

### Terms and Conditions

1) University hereby awards a (choose one): ☐ cost reimbursable ☐ firm-fixed-price subaward, as described above, to Collaborator. The statement of work and budget for this subaward are shown in Attachment 5. In its performance of subaward work, Collaborator shall be an independent entity and not an employee or agent of University.

2) University shall (choose one):
   - ☐ issue an advance payment of $___U.S. dollars upon execution of this Agreement. University shall thereafter reimburse Collaborator on a quarterly basis for allowable costs based on invoices submitted in accordance with sample invoice shown in Attachment 6.
   - ☐ pay Collaborator according to the payment schedule in Attachment 4.

Expenditures of Collaborator shall conform to budget in Attachment 5. All payments will be in U.S. dollars. Questions concerning payments should be directed to the appropriate party’s Financial Contact, as shown in Attachment 3.

3) A final statement of cumulative costs incurred, including cost sharing, marked “FINAL,” must be submitted to University’s Financial Contact NOT LATER THAN sixty (60) days after subaward end date. The final statement of costs shall constitute Collaborator’s final financial report.

4) All payments shall be considered provisional and subject to adjustment within the total estimated cost in the event such adjustment is necessary as a result of an adverse audit finding against Collaborator.

5) Matters concerning the technical performance of this subaward should be directed to the appropriate party’s Project Director, as shown in Attachment 3. Technical reports are required as shown above: “Reporting Requirements.”

6) Matters concerning the request or negotiation of any changes in the terms, conditions, or amounts cited in this subaward agreement, and any changes requiring prior approval, should be directed to the appropriate party’s Administrative Contact, as shown in Attachment 3. Any such changes made to this subaward agreement require the written approval of each party’s Authorized Official, as shown in Attachment 3.

7) Each party shall be responsible for its negligent acts or omissions and the negligent acts or omissions of its employees, officers, or directors, to the extent allowed by law.

8) Either party may terminate this agreement with thirty days written notice to the appropriate party’s Administrative Contact, as shown in Attachment 3. University shall pay Collaborator for termination costs as allowable under 45 CFR Part 74.61.

9) No-cost extensions require the approval of the University. Any requests for a no-cost extension should be addressed to and received by the Administrative Contact, as shown in Attachment 3, not less than thirty days prior to the desired effective date of the requested change.

10) The Subaward is subject to the terms and conditions of the Prime Award (Attachment 1) and other special terms and conditions, as identified in Attachment 2.

11) By signing below Collaborator makes the certifications and assurances shown in Attachment 2.

---

By an Authorized Official of UNIVERSITY: ____________________________

Name ____________________________ Date ____________

By an Authorized Official of COLLABORATOR: ____________________________

Name ____________________________ Date ____________
Recombinant DNA molecules and human gene transfer research.

1. **Research misconduct.** The research misconduct requirements included in "Public Policy Requirements and Objectives—Ethical and Safe Conduct in Science and Organizational Operations—Research Misconduct"


4. **Drug-free workplace.** Compliance with the Drug-Free Workplace Act of 1988 (Public Law 100-690, Title V, Subtitle D, as amended) requires that all organizations receiving grants from any federal agency agree to maintain a drug-free workplace. [http://grants2.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part4.htm#_Toc54600073]

5. **Debarment and suspension.** Applicants/grantees that are foreign governments or governmental entities, public international organizations, or foreign-government-owned or -controlled (in whole or in part) entities ARE NOT subject to the debarment or suspension certification requirement or to debarment or suspension under 45 CFR Part 76 [http://www.access.gpo.gov/nara/cfr/waisidx_04/45cfr76_00.html]. ALL OTHER FOREIGN INSTITUTIONS AND INTERNATIONAL ORGANIZATIONS ARE SUBJECT TO THESE REQUIREMENTS.


8. **Research on Transplantation of Human Fetal Tissue.** The Requirements Affecting the Rights and Welfare of Individuals as Research Subjects, Patients, or Recipients of Services apply to this subaward. [http://grants2.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part5.htm#_Toc54600080]


11. **Inclusion of children policy.** NIH Guidelines on the Inclusion of Children (i.e., individuals under the age of 21) as Subjects in Clinical Research. NIH has a separate policy on inclusion of children as subjects in clinical research that is similar to the policy regarding inclusion of women and minorities. The inclusion of children as subjects in research must comply with all applicable provisions of 45 CFR Part 46 and other pertinent Federal laws and regulations. [http://grants1.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part5.htm#_Toc54600090]

**General terms and conditions:**

1. 45 CFR Part 74 [http://www.access.gpo.gov/nara/cfr/waisidx_00/45cfr74_00.html] applies to this subaward.
2. The NIH Grants Policy Statement, including addenda, in effect as of the beginning date of the period of performance and found at [https://grants.nih.gov/grants/policy/policy.htm], except for the payment mechanism and final reporting requirements, which are replaced with Reporting Requirements (Attachment 4) and Terms and Conditions on the front page of this agreement.
3. Any prior approvals are to be sought from the University and not the Federal Awarding Agency.
4. Collaborator assures, by signing this Subaward Agreement, that all Collaborator’s personnel who are responsible for the design and conduct of projects involving human research participants have successfully completed their institutional training in accordance with the NIH Guide, Notice OD-00-039 <http://grants1.nih.gov/grants/guide/notice-files/NOT-OD-00-039.html>.

5. Purchase of equipment costing more than $5,000 requires prior approval of University. Title to equipment costing $5,000 or more that is purchased or fabricated with research funds or Collaborator cost sharing funds, as direct costs of the project or program, shall unconditionally vest in the Collaborator upon acquisition without further obligation to the Federal Awarding Agency subject to the conditions specified in the NIH Grants Policy Statement.

6. Collaborator is subject to the audit requirements specified in 45 CFR 74.26(d) http://www.access.gpo.gov/nara/cfr/waisidx_00/45cfr74_00.html. Collaborator agrees that the Comptroller General of the United States, or a duly authorized representative, or University, shall, until the expiration of three (3) years after final payment under this Agreement, have access to and right to examine any directly pertinent books, documents, papers and records of the Collaborator involving transactions related to this Agreement. It is understood that, unless agreed to in writing by Collaborator, such examination shall be made during Collaborator’s regularly established business hours.

7. Fiscal Considerations: In addition to requirements per Terms and Conditions paragraph 2, costs must be expressed in U.S. dollars using an exchange rate applicable at the time the invoice is submitted. Facilities and Administrative Costs (F&A) are specifically limited to 8 percent of total direct costs less equipment under this Agreement to support the costs of compliance with NIH requirements including, but not limited to, protection of human subjects, animal welfare, and research misconduct. NIH will not support the acquisition of, or provide for depreciation on, any capital expenditures, or support the normal, general operations of foreign and international organizations. http://grants2.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part12.htm#_Allowable_and_Unallowable_1

8. Customs and Import Duties are unallowable. This includes consular fees, customs surtax, value-added taxes, and other related charges.

9. Travel Regulations. Travel costs are limited to those allowed by formal organizational policy and, in the case of air travel, the lowest reasonable commercial airfares must be used. http://grants2.nih.gov/grants/policy/nihgps_2003/NIHGPS_Part6.htm#Travel

Special terms and conditions:

1. Copyrighted Material. Subject to its legal ability to do so, Collaborator shall grant to University an irrevocable, royalty-free, non-transferable, non-exclusive right and license to use, reproduce, make derivative works, display, publish, and perform any copyrights or copyrighted material (including any computer software and its documentation and/or databases) developed under this Subaward Agreement for the purpose of education and research or to the extent required to meet University’s obligations under its Prime Award.

2. Data Rights. Subject to its legal ability to do so, Collaborator shall grant to University the right to use data created in the performance of this Subaward Agreement for the purpose of education and research or to the extent required to meet University's obligations under its Prime Award.

3. Disputes: Resolution of disputes of a technical nature shall be resolved through good faith negotiations. Any dispute arising under or related to this Agreement shall be resolved to the maximum possible extent through negotiations and settlement. Failing settlement, despite good faith efforts by both parties, any such unresolved issues shall be arbitrated in accordance with the International Arbitration Rules of the American Arbitration Association.
**Figure 3530.3-1, continued**

<table>
<thead>
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Figure 3530.3-1, continued

Attachment 4
Subaward Agreement

Reporting Requirements
Quarterly expenditure reports are due within 30 days of the quarter end date. The reports should include current and cumulative costs, Subaward number, and certification as to truth and accuracy of the report [include this requirement for firm-fixed-price Subaward Agreement]. In accordance with 37 CFR 401.14, Collaborator shall notify University’s Administrative Contact, as stated in Attachment 3, within two months after Collaborator’s inventor discloses invention(s) in writing to Collaborator personnel responsible for patent matters.

Final Technical Report: To be submitted within sixty (60) days of the termination date of this Agreement to the University Principal Investigator as stated in Attachment 3.

Final Patent Report: To be submitted within sixty (60) days of the termination date of this Agreement to the University Administrative Contact as stated in Attachment 3. A negative report is required.

All reporting shall be in English and in U.S. dollars ($US).

Payment Schedule [include for firm-fixed-price Subaward Agreement]

University shall pay Collaborator according to the following schedule:

Payment 1) University will issue an advance payment of dollars U.S. ($U.S.) upon full execution of this Agreement.

Payment 2) Milestone/deliverable, etc.

Payment 3)

Payment 4)
Knowledge Check

AIS editors

The Q&As at §3590.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3500 has been understood. Note: For the answer key for §3590.1, see §3590.3, which appears on a separate page (page 3590:5) for testing purposes.

Discussion topics at §3590.2 are designed to engender dialogue among staff on general issues of importance in the field.

Q&As

1. According to §3505, a particularly helpful site for information concerning monitoring international entities and research agreements is sponsored by which of the following:
   (a) The European Union portal
   (b) The International Development Research Centre (IDRC)
   (c) The Canadian Government Ministry of Trade
   (d) The International Business Improvement Group (IBIG)

2. The International Compilation of Human Subject Research Protections was developed by the
   (a) U.K. Human Subjects Protection Programme
   (b) European Association for the Protection of Human Research Participants
   (c) International Regime Governing Human Research Protections
   (d) U.S. Department of Health and Human Services Office for Human Research Protections

3. Which of the following organizations would you consult for various European training courses, such as workshops on intellectual property rights and contracting:
   (a) Institute of Medicine
   (b) European Association of Research Export Officers
   (c) International Society of Research Officers
   (d) European Association of Research Managers and Administrators

4. The concept of “andragogy” as discussed in §3505 can encompass all of the following EXCEPT:
   (a) Adults should be involved, as much as possible, in the planning and evaluation of their instruction and learning.
   (b) Experiences (both positive and disappointing) provide an optimal basis for learning.
   (c) Adults are generally most interested in learning about subjects/topics/processes that have immediate and direct relevance to their work or personal life.
   (d) Adult learning is generally more “content-oriented” than “problem-centered.”
5. The Swedish Research Council’s gateway to various research ethics guidelines is called
(a) CODEX
(b) The International Fogarty Center
(c) SARIMA
(d) SARMA

6. Before engaging in international activities, it is suggested that an institution check the following lists EXCEPT:
(a) Specially Designated Nationals (SDN) list
(b) Entities List
(c) Denied Persons list
(d) Proliferation of Sanctions list

7. The Foreign Corrupt Practices Act (FCPA) contains two sets of restrictions, relating to
(a) Anti-racketeering and sanctions practices
(b) Money laundering and accounting practices
(c) Anti-bribery and accounting practices
(d) Taxation and accounting practices

8. Two U.S. laws separately maintained by which two U.S. agencies prohibit or penalize participation in, or cooperation with, foreign boycotts that the United States does not sanction?
(a) Departments of Commerce and Defense
(b) Departments of Commerce and Treasury
(c) Departments of State and Treasury
(d) Departments of Defense and Treasury
13590.2 **Discussion Topics**

1. As it may not be possible to physically visit international institutions with which you are collaborating, one suggestion is to perform an “electronic site visit.” How would you do this and what would be involved?

2. Given the additional complexities that come with international collaborations, why would an institution ever engage in such collaboration?

3. What types of processes and policies need to be established especially — and organizationally who would be in charge of establishing these — at your institution to support your international research collaborations?

4. There may be cultural differences that need to be taken into consideration in the conduct of international collaborations? What does this term mean and how might these differences be identified and overcome or affectively addressed so that the collaboration can proceed?
13590.3  Answer Key
Following are the correct answers to the questions included at ¶3590.1.
1. (b) The International Development Research Centre (IDRC)
2. (d) U.S. Department of Health and Human Services Office for Human Research Protections
3. (d) European Association of Research Managers and Administrators (EARMA)
4. (d) Adult learning is generally more “content-oriented” than “problem-centered.”
5. (a) CODEX
6. (d) Proliferation of Sanctions list
7. (c) Anti-bribery and accounting practices
8. (b) Departments of Commerce and Treasury
PLACE TAB

¶ 3700 Subawards
# Chapter 3700
## Subawards

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Introduction

This chapter covers a topic of increasing concern to all research administrators—subawards to collaborating institutions—as interinstitutional research collaborations is one of the fastest-growing areas within the realm of sponsored programs at colleges and universities.

Jennifer Barron of Johns Hopkins University has updated information originally developed by Robert Killoren. With input from subject matter experts Mora Harris, JHU; Sandra Fink, JHU; Stephanie Scott, Columbia University; and Laura Register, Stanford University, this chapter provides a thorough yet highly accessible discussion of the world of subawards. It begins with a description of the financial assistance model under which subawards are clearly separated from “subcontracts,” “vendor agreements,” and “consulting agreements.” Once again, we are reminded that research administration has evolved its own highly specialized vocabulary. Understanding the terms is absolutely critical to being able to make sense of complex relationships such as those contemplated in a subaward.

The chapter provides a complete and useful description of the multitude of considerations necessary to effectively manage this key mechanism that supports collaborative research including the standard agreement template for research collaborations between colleges and universities that was developed and tested by the members of the Federal Demonstration Partnership (FDP). This model agreement was approved by the Office of Management and Budget (OMB) and has been used regularly throughout the higher education community.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to ¶3705, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related resources and practical tools.
This chapter examines the policies and procedures necessary to effectively and efficiently manage subawards on federal grants. It also includes information regarding the model subaward agreement form originally developed by the Federal Demonstration Partnership (FDP). In January 2005, the Office of Management and Budget (OMB) and the Office of Science and Technology Policy (OSTP) endorsed this form as a national standard for streamlining research collaborations with universities and not-for-profit organizations. This regularly updated form has been adopted nationally since, and annually saves hundreds of thousands of dollars in person-hours devoted to processing subaward agreements.

This chapter also discusses the important tasks surrounding subrecipient monitoring, which have become a focus of the new Uniform Guidance regulations (2 CFR 200). Over a decade ago, streamlined federal requirements allowed universities to rely on audit information found in the Federal Audit Clearinghouse (FAC) when conducting subrecipient monitoring. (See Figure 3705-1 for background on the FDP and the FAC.) Uniform Guidance builds on that foundation and provides further instruction on appropriate subrecipient monitoring.

This chapter focuses on the relationship between a “pass-through entity (PTE)” institution under a grant that issues “subawards” to “subrecipient” institutions. There are other ways that the PTE can involve multiple institutions not covered in this discussion, including:

◆ a purchasing agreement, which may be used when an organization is simply providing a service to the PTE, such as performing a routine sample analysis in which one of its labs excels, or when the lead institution is procuring the assistance of another organization’s survey center;

◆ a subcontract, which is used when the PTE is procuring sophisticated levels of research expertise to accomplish a segment of a project’s scope of work under a contract (rather than grant) award; and

◆ a consulting agreement, which is used to engage independent contractors rather than institutions.

Sometimes the terms “subaward” and “subcontract” are used interchangeably, but in the strictest sense they are distinct. Generally, a “subaward” is used when the originating award is a grant or cooperative agreement (the federal government refers to these as financial assistance awards), and a “subcontract” is used when the originating award is a contract. This chapter uses this basic differentiation when referring to subawards. (For a full discussion of administering research contracts, see Chapter 2700.)

Finally, coverage in the chapter is limited to federal funding granted by a pass-
through entity to subrecipients when both institutions are subject to Uniform Guidance. Even in situations where this is not the case, institutions will find that many of the procedures discussed below are appropriate to follow when an institution is dealing with other types of sponsors as well.

§3705.1 Research Collaborations

Research collaborations among researchers at different institutions are commonplace today. The increase in these types of arrangements is a result of several factors: the result of the increasing sophistication of science and the sheer magnitude of the research enterprise; the move towards multi-disciplinary, translational projects; and a move by the federal government to reduce the number of prime awards issued and reduce their administrative burden. While individual investigator-initiated research projects still make up the bulk of awards from most federal sponsors like the National Science Foundation (NSF) and the National Institutes of Health (NIH), big science increasingly demands big solutions to reveal the mysteries of nature and human interactions. Such solutions can only be unraveled by engaging scientists from a wide variety of disciplines, each bringing individual specialties to bear on a single

Figure 3705-1: What Are the FDP and FAC?

The Federal Demonstration Partnership

The Federal Demonstration Partnership (FDP) is a cooperative initiative among 10 federal agencies and 155 institutional recipients of federal funds; its purpose is to reduce the administrative burdens associated with research grants and contracts. The interaction between FDP’s 450 or so university and federal members takes place at three annual meetings and, more extensively, in the many collaborative working groups and task forces that meet often by conference calls in order to develop specific work products. The FDP is a unique forum for individuals from universities and nonprofits to work collaboratively with federal agency officials to improve the national research enterprise. More about the activities and member institutions of the FDP can be found at: www.thefdp.org

Federal Audit Clearinghouse

The Office of Management and Budget established the Federal Audit Clearinghouse (FAC) to serve as the repository for the data collection form, Form SF-SAC, and the single audit reporting packages. The FAC then compiles the data contained in the package and provides that information, along with other appropriate information about the auditee, its audit report, and federal programs to awarding agencies. Its primary purposes are to:

◆ Distribute single audit reporting packages to federal agencies.
◆ Support OMB oversight and assessment of federal award audit requirements.
◆ Maintain a public database of completed audits.
◆ Help auditors and auditees minimize the reporting burden of complying with Uniform Guidance audit requirements.

More about the FAC can be found at: http://harvester.census.gov/sac/
problem. Even the largest and best research institutions in America cannot fully staff the full breadth of expertise needed to work on some problems.

Because a finite amount of money is spent on research, federal agencies are also looking for ways to get the “biggest bang for the buck.” Agencies frequently encourage collaborations between institutions. They employ this team approach not only to find financial efficiencies, but also to encourage diversity. It is thought that such diversity can spark synergies, as well as have a positive long-term impact by increasing the overall scientific base upon which new knowledge is generated. The best scientists in the country may not be in the biggest schools or in particular regions of the country, nor is scientific expertise and dedication limited to gender, race, or ethnic background. Collaborations among large and small institutions, public and private institutions, institutions from different parts of the country, and predominantly minority institutions and those that are not, are necessary to meet the demands of science and society.

Collaborations between institutions are sometimes accomplished with collaborative research awards, where each institution submits its own proposal with a common project description but different budgets. NSF, for instance, accepts related proposals from different institutions and then combines them for review. Successful collaborative proposals yield separate awards to each institution. More often, however, one institution among the collaborators is selected as the lead institution, with the others serving as subrecipients. In this case, the lead institution submits a single proposal on behalf of all the collaborating institutions. If successful, a single grant award is made to the lead institution, and the lead institution makes subawards to the collaborators. This latter arrangement is the focus of this chapter.

### 3705.2 Key Terms

**Figure 3705-2-1: Who’s Who**

- **Recipient** receives financial assistance (an award) directly from a federal agency
  - Also called:
    - Awardee
    - Lead institution
    - University
    - Grantee or prime grantee
    - Pass-through entity
  - Subrecipient receives financial assistance (a subaward) from a recipient
    - Also called:
      - Subawardee
      - Collaborating Institution
      - Collaborator
      - Subgrantee

Uniform Guidance contains the formal definitions of terms used for federal awards. Understanding these definitions is extremely important to understanding the policies and procedures affecting subawards. Definitions of key terms associated with subawards are included below, followed by brief commentary on the terms’ relevancy for a college or university office of sponsored programs (OSP).

*Grant Agreement* means a legal instrument of financial assistance between a Fed-
eral awarding agency or pass-through entity and a non-Federal entity. (§200.51)

The first thing to note is a “grant agreement” means financial assistance; that is, the granting of a grant agreement is not considered a purchasing or procurement activity. The government is not buying something from a university when it gives the institution a grant agreement; rather, it is providing financial assistance necessary to help the institution fulfill its own mission. By using the word assistance, the implication is the funds are given to supplement the institution’s capacity to perform the project.

The concept of financial assistance also suggests that the institution assumes a binding obligation to perform in response to the federal government’s granting of support. However, a grant agreement is not exclusively meant to support an ongoing activity of an institution. Sometimes the grant is to stimulate new activities at the institution that may be of national interest and fall within the institution’s mission and purpose, but currently are not being undertaken. A grant agreement is always made “to accomplish a public purpose.” The government is awarding money derived from public support, e.g., taxes. Therefore awards may not be used for the private benefit or enrichment of persons or entities.

Recipient means a non-Federal entity that receives a Federal award directly from a Federal awarding agency to carry out an activity under a Federal program. The term recipient does not include subrecipients. (§200.86)

Under Uniform Guidance, awards are given to “recipients.” Often the term “grantee” is used, but the formal, technical term is recipient. When recipients share federal funds with subrecipients, they are referred to as “pass-through entities.” Organizations can be recipients but, in general, individuals cannot. Some grant agreements are made to individuals, such as those funded by the National Endowment for the Humanities. However, awards for individuals are administered under different administrative requirements than are awards to institutions. Uniform Guidance states specifically that recipients must be a non-Federal entity, which includes “a state, local government, Indian tribe, institution of higher education (IHE), or nonprofit organization.”

Recipients can receive funding directly from a Federal agency, or indirectly from a pass-through entity (PTE). When receiving funding from a pass-through entity, recipients are referred to as “subrecipients.” In accepting financial assistance, a recipient’s use of grant funds is restricted to carrying out the project or program that fulfills the public purpose supported by the award.

Pass-through entity means a non-Federal entity that provides a subaward to a subrecipient to carry out part of a Federal program. (§200.74)

Once a recipient gives a subaward to another organization, the recipient, as the pass-through entity, takes on the role of the federal government and assumes the responsibility to monitor a subrecipient’s technical and financial progress and compliance. Thus, subrecipients do not report directly to a federal agency, but to the pass-through entity. In some cases, a subrecipient can in turn award a subaward to a lower-tier subrecipient. In those cases, the subrecipient would also be considered a
pass-through entity.

Subaward means an award provided by a pass-through entity to a subrecipient for the subrecipient to carry out an intellectually significant portion of the scope of work of a federal award received by the pass-through entity. A subaward may be provided through any legal instrument type, including an agreement that the pass-through entity considers a contract. (§200.92) A subaward would not be used for payments to a contractor or payments to an individual beneficiary of a federal program.

A “subaward” is made to a subrecipient to carry out part of a federal award. The subaward “flows down” terms and conditions from the award issued to the pass-through entity to an eligible subrecipient, carrying along with it the requirement that it must support or stimulate the subrecipient to accomplish a public purpose. Federal assistance retains its identity as long as it flows down to eligible subrecipients, regardless of what the mechanism for moving the funds is called. According to Uniform Guidance, “a subaward may be provided through any legal agreement, including an agreement that the pass-through entity considers a contract.”

Subrecipient means a non-Federal entity that receives a subaward from a pass-through entity to carry out an intellectually significant portion of the scope of work of a Federal program; but does not include an individual that is a beneficiary of such program. (§200.93). A “subrecipient” must be a non-Federal organization, not an individual, as defined in 2 CFR §200.69.

\subsection{3705.3 Resources Required for Administering Subawards}

Subaward administration can be included as part of any number of research administration functions, including pre-award, post-award, financial, and departmental communications, either as a centralized function, a decentralized function, or a distributed or shared function. Whatever organizational model is used, however, the range of operations associated with subawards should be considered in assigning oversight responsibilities.

\subsubsection{Budget Review}

The same individual or team that reviews the overall budget for the originating proposal should also be responsible for reviewing and incorporating the budgets for any subawards. Subaward costs must be distinct from the costs of the pass-through entity in proposal budgets. Salaries and wages of subrecipients do not show up in the personnel line of the recipient’s budget, for example. Rather, salaries, fringe benefits, equipment, and other direct costs of a subrecipient’s component of the overall program are included in a single line item of the recipient’s budget, with details provided in budget notes or backup documentation. Thus, organizationally, approval of a detailed subrecipient budget should be assigned to the same pre-award unit that reviews budgets for proposals, whether the institution is the pass-through entity or a planned subrecipient. (See 3705.4 for more information.)
Post Award
The same logic applies for post-award operations associated with subawards. The technical progress of a subrecipient needs to be monitored by the principal investigator (PI), and the same PI and his or her department should review, and at most institutions approve and sign, all subrecipient invoices. This is most reasonable, since it is the PI and department staff who are most knowledgeable about the subrecipient’s performance.

Written Policy
Subawards are a favorite target of auditors, so it pays to ensure that the institution’s policy on subawards is in writing, addresses all aspects of subaward management, and is readily available to all project personnel. Be sure that anything included in your written policy is supported by actual practices, and not just an idealized document of what “should” be done. Specialized training for managing subawards is also a necessity for those involved in the process. It is extremely important to communicate to the PI the special responsibilities involved with subawards, particularly when a subrecipient is considered higher risk. If things go amiss in collaborations, it is often because faculty misunderstand their roles and responsibilities regarding subawards, resulting in failure to closely monitor the progress and performance of subrecipients. Failures of communication can readily spoil good scientific relationships and can lead to unsuccessful projects.

Communications
Communications among the sponsored programs office, departmental and college research administration offices, and research accounting operations are essential in administering every subaward. A kickoff meeting with PIs and their assistants who will be handling the accounting and other processes is an effective way to begin the collaboration. Communications among PIs and research administrators from both lead and collaborating institutions need to take place initially and on an ongoing basis to head off problems and resolve differences. Find avenues to remind all individuals involved in subaward management of the institutional subaward policy. This can be done via email communications at the issuance of a subaward, or as a reminder during a subaward modification. Initial and ongoing training programs for PIs, departmental staff, and central office personnel should be conducted on a regular basis to keep new and existing personnel up to date and to address any changes to process or policy.

Tracking System
In addition to a solid understanding of subaward requirements and an organizational structure that allows them to carry out their responsibilities effectively, research administrators across the institution optimally will have access to a subawards tracking database or some other kind of tracking system. Depending on the size of the institution and the number of subawards that need to be tracked, such a system could be created using relatively simple Excel™ spreadsheets, database programs like Access™, or a subaward information system that is integrated into an
institution’s financial or electronic research administration (eRA) systems. Whatever type of system selected, it should be capable of alerting staff about risk assessment, monitoring requirements, milestones, modifications, and deadlines. Subawarding is very much a date-driven process, often involving negotiations between institutions with back and forth communications. It is helpful to track the dates subawards are initially issued to subrecipients, dates when they respond, dates when the PTE needs to follow-up, fiscal year end dates, and the dates of partial and fully executed agreements. (For an in-depth discussion of information systems and eRA, see Chapters 700 and 900, respectively.)

Staffing
As discussed above, the staff member who prepares the award budget typically will handle the subaward budget as well. However, there are certain functions — such as the issuance, negotiation, and administration of subawards — that an institution could choose to handle in a unit dedicated to subawards management, so that there is a consistent treatment and handling of all subawards.

Depending on the volume and complexity of subawards issued by an institution, staffing requirements may vary greatly. Institutions that issue a large number of subawards may benefit from having a team that does nothing but manage subawards. Many such institutions have made managing subawards a specialty of research administration, with its own policies and procedures.

In OSPs that are organized around a customer-based management system (where individuals or teams manage grants from inception to closeout for specific academic units), it makes sense for a team to have oversight of any subawards made under their customers’ awards. Likewise, institutions that emphasize one-stop-shopping concepts may have subawards handled by the team that manages all related administration and financial management associated with a particular project, since the assigned staff is already familiar with that project. This approach provides continuity in administering the project, but can lead to workflow difficulties if the number of subawards is not distributed equally among all teams in the office, or if there are competing deadlines among proposals, awards, and subawards.

In smaller institutions or institutions that do not handle many subawards, it is important that staff working with subawards understand the unique requirements that apply to subawards.

Some institutions assign subawards management to the purchasing department because that office is already handling purchases of services and subcontracts. In most instances this is not the preferred location for managing subawards, because it presents, in a sense, a contradiction in terms. Since subawards by definition are not procurement, but federal assistance, they should not be managed in the same manner as the purchase of goods and services. There can also be contractual implications such as intellectual property or export control that procurement offices may not be prepared to negotiate.

If the institution prefers to create a stand-alone team to administer subawards, this team should have at least some part of an experienced research administrator’s
effort and a staff assistant who would be responsible for the entire subawards process from the award phase to closeout for all subawards.

Some institutions foster the creation of a staff subaward expert to provide help and advice to the entire OSP staff. The subaward expert may:

◆ be available as a resource to anyone in the office,
◆ keep tabs on new developments in national policies regarding subawards,
◆ oversee the institution’s subawards tracking system,
◆ perform various reporting functions, including FFATA reporting, and
◆ act as interface on subawards with auditors.

¶3705.4 Proposal Preparation and Submission

The first step in formally establishing a collaboration between research institutions is submission of a proposal to a funding agency. Although many aspects of proposal development are the same whether or not an institution proposes with collaborators, there are additional requirements imposed by Uniform Guidance. There are also often more complex logistics when submitting proposals with subrecipients.

Subrecipient Determination

Prior to proposal submission, the pass-through entity is required by Uniform Guidance in §200.330 to document its determination that a collaborator is correctly identified as a subrecipient rather than a contractor. This classification will determine the type of legal agreement required to document the relationship. Properly classifying the relationship is essential because it determines the allocation of responsibilities, influences the appropriate application of indirect cost rates, and ensures proper accounting for costs and compliance requirements. FDP has developed a form that can be used to document the determination of a subrecipient, which can be found on the Subaward Subcommittee page of the FDP website.

In order to properly make a determination of whether a collaborator is a subrecipient or a contractor, it is important to understand the distinction.

Characteristics of a subrecipient relationship include those where the subrecipient conducts some of the following types of activities:

1. Determines who is eligible to receive Federal assistance;
2. Has its performance measured in relation to whether objectives of the Federal program are met;
3. Has responsibility for programmatic decision making;
4. Has responsibility for adherence to applicable Federal program requirements specified in the Federal award; and
5. Uses the Federal funds to carry out a program for a public purpose specified in authorizing statute, as opposed to providing goods or services for the benefit of the pass-through entity.
On the other hand, a contract for goods and services occurs when the contractor performs any of the following kinds of activities:

1. Provides the goods and services within normal business operations;
2. Provides similar goods or services to many different purchasers;
3. Normally operates in a competitive environment;
4. Provides goods or services that are ancillary to the operation of the Federal program; and
5. Is not subject to compliance requirements of the Federal program as a result of the agreement, though similar requirements may apply for other reasons.

A non-Federal entity would typically enter into a contract for goods or services with a contractor for its own use through a procurement relationship.

It is important that the correct agreement determination is made early in the process of preparing a grant application, as Facilities and Administrative (F&A) treatment and monitoring requirements for these types of agreements vary and will impact the award budget and, in some cases, the statement of work. In addition, if specified in the award terms and conditions, sponsor approval may be required prior to executing a subaward.

At times, purchased services from an organizational entity do not involve substantive programmatic or scientific research, and a contract for goods and services may be appropriate. An example would be the performance of repetitive tests or activities requiring no discretionary judgment on the part of the provider, or activities which are related to the administrative support of the federal assistance program. In these cases, the pass-through entity must exercise judgment in determining whether an entity will serve as a subrecipient or contractor for the scope of work being performed. Misclassification may result in delays of subaward processing, and failure to include or exclude F&A costs will lead to significant errors in budget calculations.

**Proposal Package**

The following is the recommended minimum information needed from a subrecipient for inclusion in the proposal:

- A statement of the work to be performed under the subaward
- A budget prepared using the budget format and level of detail as required by the sponsoring agency
- Completed representations and certifications, including FCOI certifications, if required at the time of proposal submission
- The signature of an authorized official of the subrecipient, signifying the collaborator’s commitment to carrying out the project if funded.
- Additional institutional forms may be required if the proposal contains foreign subawards, or if the total dollar amount of subawards requested is more than the amount requested to cover the work of the pass-through entity.
The subaward material should be received well in advance of the proposal deadline to allow for a review for completeness and its incorporation into the proposal. It is important for the pass-through entity to carefully review the package to ensure that no material or necessary approvals from the collaborating university are missing.

Once the entire proposal package is assembled, the proposal is ready for submission. The submission process for a proposal containing subawards is the same as is required for submitting any other proposal to a particular sponsor. During the proposal review cycle, it is important for all participating parties to stay in regular communication, especially if there are changes to the budget and scope of work to negotiate during the approval process.

**Scope of Work**

PIs from the collaborating institutions are responsible for developing the proposal. There are multiple ways to approach the writing of a collaborative proposal, depending on the scope of the collaboration and the relative contributions of the parties. The method used most often is to split the proposal into its constituent parts, assigning parts of the proposal writing to the proper investigators who eventually will be responsible for their respective parts of the project. The lead institution’s PI then combines the various contributions into a convincing, comprehensive finished product.

During development of the proposal narrative, a joint project can begin to fall apart if the expectations embodied in each investigator’s contributions to the project are not clearly understood by the collaborators. It is not a good idea for a joint proposal to be written with the understanding that all parties are simply “doing everything together” or, for that matter, “doing their own thing.” Instead, one should make sure the proposal contains a statement of work clearly indicating for what the lead institution and each other party will be responsible.

When reviewing a statement of work, consider including the following items to ensure expectations are clear and well defined:

- A detailed description of the work to be performed
- Clearly state what you want the subrecipient to achieve and deliver
- Will travel be required to complete the work?
- Is there a specific number of times something needs to be “done” (i.e. interview 10 subjects)
- Period of Performance – when does this work start and end?
- Deliverables -- include a timeline of major deliverable due dates
- Include milestones as necessary so that the work can be monitored to ensure that progress is being made and the quality of the work is as expected
- Are there any special requirements?
- Include a definition of completion -- if a final product is submitted, what
constitutes acceptance?

◆ Payment terms
  ◆ Tied to milestones or acceptance of deliverables?
  ◆ Based on monthly invoices?
  ◆ Lump sum at the end of the project?

**Budget**

The budget is the fiscal expression of the project’s scope of work. It needs to accurately reflect the costs of the activities to be undertaken by each collaborator. The pass-through entity is responsible for submitting the overall project budget in the proposal. Subaward estimated costs are not to be interwoven with the pass-through entity’s costs throughout the budget, but included as a separate direct-cost line item in the proposal. If there are multiple subawards proposed, the total cost for each subaward should be provided in the budget along with the name of each collaborating institution, if space allows. The total of all subawards should be entered as the amount for that budget category.

Federal agency guidelines and budget forms often use a term like “subcontracts” instead of “subawards,” but as stated earlier, financial assistance keeps its identity no matter what the proposal calls it. If there is not enough space provided on the budget form to list each subaward separately, use the budget justification page to identify each subrecipient and its total costs.

On NIH modular grants, one must list separately the F&A (facilities and administrative) costs for the “consortium members” (NIH-speak for subrecipients) on the top of the budget justification form. In the justification narrative, each consortium institution’s estimated costs per year must be identified, showing how each sum is split between direct and F&A costs. It is important to note that when NIH establishes a ceiling on the amount of funds that can be requested on a grant, F&A costs related to consortium subawards usually are not factored into this budget limit. Be sure to check the program announcement carefully to confirm what costs may or may not be included under a cap.

The level of effort of the PI and project personnel must be shown, indicating the scope of work each will contribute to the overall project. Since many agencies require approval before including subrecipients in a project, it is important to list each subrecipient explicitly, as this will serve as agency approval. It is almost always a good idea to include a complete budget from the subrecipient as part of the documentation accompanying the proposal.

**F&A Recovery**

Because the pass-through entity is responsible for the management of all subrecipients, it is eligible for a certain amount of F&A costs to help cover the costs of that administrative burden. When calculating F&A based on modified total direct costs (MTDC) for instance, F&A is allowed to be charged on the first $25,000 of each subaward. That limit covers the competitive segment of the project. Thus for a three-
year grant, the pass-through entity only gets F&A on the first $25,000 of the total amount given to each subrecipient for the entire three-year grant period. When receiving a competitive renewal for another three years, the grant is given a “new life” and the F&A cycle begins again. Each subrecipient, on the other hand, is entitled to its full F&A recovery throughout the life of the award, unless there are limitations imposed on the entire proposal by the sponsoring agency.

It is improper to ask the subrecipient to lower its F&A request in order to make more direct costs available for a project. PIs from time to time have been known to attempt to force a reduced F&A recovery “requirement” on subrecipients as a prerequisite for participating in the project. Uniform Guidance prohibits this practice in §200.331(a), which requires the pass-through entity to provide the subrecipient “an approved federally recognized indirect cost rate negotiated between the subrecipient and the Federal Government or, if no such rate exists, either a rate negotiated between the pass-through entity and the subrecipient (in compliance with this part), or a de minimis indirect cost rate as defined in §200.414 Indirect (F&A) costs, paragraph (f)”.

One of the responsibilities of the OSP is to explain to PIs the appropriateness and importance of each subrecipient (and of course the prime) institution recovering its full allowed F&A reimbursement. (For more on F&A costs and recovery, see Chapter 1700.)

**Cost/Price Analysis**

The pass-through entity is responsible for determining the reasonableness of all costs associated with their federal award, including those costs incurred by subrecipients. One way to assess reasonableness is to conduct and document a cost or price analysis when selecting a subrecipient, both when competitively bidding and when using a sole or single source. Under a federal contract, a cost or price analysis is required by the Federal Acquisition Regulations (FAR) to be performed each time a subrecipient is proposed or selected. While not explicitly required by Uniform Guidance, a similar process is recommended for subawards issued under a federal assistance award to ensure compliance with §200.403.

Cost or Price Analysis should be done at the proposal stage, before a subaward is proposed.

<table>
<thead>
<tr>
<th>Questions to Ask in Performing a Cost or Price Analysis</th>
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<tbody>
<tr>
<td>• Have multiple quotes been received and compared for the work?</td>
</tr>
<tr>
<td>• Has cost/price been compared to similar work available in the marketplace/industry?</td>
</tr>
<tr>
<td>• Has the subrecipient provided a copy of their indirect cost rate agreement?</td>
</tr>
<tr>
<td>• Have costs been evaluated for reasonableness, allocability, and allowability?</td>
</tr>
<tr>
<td>• Have details been provided in response to the questions above?</td>
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</tbody>
</table>

**Cost Analysis** is the review of separate elements of cost and supporting data on a cost-reimbursement subaward. Such analysis may include:

◆ Review of each cost element and supporting information
◆ Determination of whether each cost is necessary and reasonable
Evaluation of cost trends and reasonableness of estimates

Comparison of the application of audited and negotiated F&A rates, labor rates, etc.

Comparison of proposed subrecipient costs with:

- Actual costs previously incurred by subrecipient;
- Previous cost estimates from the subrecipient or other subrecipients for similar items;
- Other cost estimates received in response to the solicitation; or
- Independent estimates by technical personnel

*Price Analysis* is the review of the entire contract price of a fixed-price subaward, without looking at individual items of cost. Characteristics include:

- Used to evaluate the total price under fixed-price awards
- The review of the full price of the subaward without evaluating the individual cost elements

Evaluation based on price comparisons:

- Competitive bids
- Published price lists
- Compare to cost estimates
- Market research
- Historical data/experience

Reviewing the reasonableness of the subrecipient’s costs is a good business practice to ensure the understanding and justification of costs proposed by the subrecipients. Although documenting such analyses is not explicitly required under federal assistance awards, doing so will ensure that an institution has access to any information that may be requested by auditors.

**Request for a Subaward**

After an award is made, the subaward documents must be prepared. The first step in this process is for the PI to initiate a request for OSP to issue subaward. It is important that the PI initiates this process, as an OSP might be unaware of changes that have occurred among the PIs between the time of proposal submission and grant award. For instance, the PI on the subaward may have changed institutions. The subaward request, as submitted by the PI, should include any budget revisions or changes to scopes of work that may have been negotiated between the PI and the agency’s program officer prior to the award. (It would have been preferable if the OSP had been notified of these negotiations, but this does not always happen.)

**Risk Assessment**

Uniform Guidance requires that each pass-through entity evaluate each subrecipient’s risk of noncompliance with Federal statutes, regulations, and the terms and
conditions of the subaward for purposes of determining the appropriate subrecipient monitoring. This assessment should be done prior to the issuance of a subaward and annually thereafter. (§200.331(b)) Such evaluation may include consideration of such factors as:

- The subrecipient’s prior experience with the same or similar subawards;
- The results of previous audits including whether or not the subrecipient receives a Single Audit in accordance with Subpart F—Audit Requirements, and the extent to which the same or similar subaward has been audited as a major program;
- Whether the subrecipient has new personnel or new or substantially changed systems; and
- The extent and results of Federal awarding agency monitoring (e.g., if the subrecipient also receives Federal awards directly from a Federal awarding agency).

In addition to the suggestions in Uniform Guidance listed above, other factors can be used to determine risk:

- Program complexity. Programs with complex compliance requirements have a higher risk of noncompliance.
- Percentage passed through. The larger the percentage of program awards passed through, the greater the need for subrecipient monitoring.
- Amount of awards. Large dollar awards are greater risks.

Subrecipients may be evaluated as higher risk or lower risk to determine the need for closer monitoring. The range used by institutions to identify risk varies, including high v. low risk, low, medium or high risk, or ratings on a scale of 1-10, for example. Generally, new subrecipients would require closer monitoring. For existing subrecipients, based on results of during-the-award monitoring and subrecipient audits, a subrecipient may warrant closer monitoring (for example, if the subrecipient has (1) a history of noncompliance as either a recipient or subrecipient, (2) new personnel, or (3) new or substantially changed systems).

The pass-through entity is responsible for developing its own procedures to be used and compliance areas to be tested, depending on the risk determined by using the above standards, and documenting the determination for each subrecipient accordingly. Based on the institution’s procedures, auditors would look to review specifics on the nature and extent of monitoring activities.

FDP has created a Risk Assessment Tool (RAQ) which can be utilized for this requirement, and can be found on the Subaward Agreement Forms page of the FDP website. The RAQ provides a good starting place for institutions to craft a risk assessment process and to document assessment of risk. It supports responsible stewardship of awarded funds and other institutional needs, as well as compliance with the Uniform Guidance and other sponsor requirements. The RAQ is not designed to be prescriptive in how an institution will determine or manage risk, nor does it represent every possible scenario. The RAQ focuses on Federal and Federal flow-
through funds, but could be used to assess risk of subrecipients regardless of funding source. It is a tool to assist a pass-through entity with determining the risk of a subrecipient, and should not be recycled as a questionnaire to send to a subrecipient to complete. Use of the RAQ does not guarantee a clean audit. FDP has also developed a companion Continuing Assessment Tool (CAT), which can be used annually or at time of a subaward modification to supplement the RAQ.

§3705.5 Subaward Agreements

Uniform Guidance (§200.331(a)(1)) is very clear on what data elements must be included in every subaward. The following items must be part of all subawards:

i. Subrecipient name (which must match the name associated with its unique entity identifier);

ii. Subrecipient’s unique entity identifier;

iii. Federal Award Identification Number (FAIN);

iv. Federal Award Date (see §200.39 Federal award date) of award to the recipient by the Federal agency;

v. Subaward Period of Performance Start and End Date;

vi. Amount of Federal Funds Obligated by this action by the pass-through entity to the subrecipient;

vii. Total Amount of Federal Funds Obligated to the subrecipient by the pass-through entity including the current obligation;

viii. Total Amount of the Federal Award committed to the subrecipient by the pass-through entity;

ix. Federal award project description, as required to be responsive to the Federal Funding Accountability and Transparency Act (FFATA);

x. Name of Federal awarding agency, pass-through entity, and contact information for awarding official of the Pass-through entity;

xi. CFDA Number and Name; the pass-through entity must identify the dollar amount made available under each Federal award and the CFDA number at time of disbursement;

xii. Identification of whether the award is R&D; and

xiii. Indirect cost rate for the Federal award (including if the de minimis rate is charged per §200.414 Indirect (F&A) costs.

The terms and conditions of the subaward need to address the following, in accordance with Uniform Guidance:

◆ The subaward is clearly identified to the subrecipient as a subaward;

◆ All requirements imposed by the pass-through entity on the subrecipient so that the Federal award is used in accordance with Federal statutes, regulations, and the terms and conditions of the Federal award;
Any additional requirements that the pass-through entity imposes on the subrecipient in order for the pass-through entity to meet its own responsibility to the Federal awarding agency including identification of any required financial and performance reports;

A requirement that the subrecipient permit the pass-through entity and auditors to have access to the subrecipient’s records and financial statements as necessary for the pass-through entity to meet the requirements of this part; and

Appropriate terms and conditions concerning closeout of the subaward. (See 2 CFR 200.331(a)(2)-(6))

Consider imposing specific subaward conditions upon a subrecipient if appropriate as described in §200.207 Specific conditions. (See 2 CFR 200.331(c))

Other terms and conditions that should be included, but are not required by Uniform Guidance, include:

Statement of subrecipient’s legal standing (e.g., independent entity and not an employee)

Reimbursement process (e.g., submission of invoices and billing cycles)

Submission of final invoices

Schedule of progress reports or deliverables due

Subaward modification process

Termination process

No-cost extension process

Liabilities of each party

Any special intellectual property, data rights, and publication arrangements

The pass-through entity may have other institution-specific requirements to follow, such as special state requirements that also need to be addressed in the subaward. Most importantly, subawards must be signed by the appropriate authorized officials of both the subrecipient and the pass-through entity.

**FDP Subaward Template Agreement Form**

There are many different ways that institutions can present the above-listed elements in a subaward. This variability in presenting the award terms and conditions can cause misunderstandings between parties to arise, which can lead to extended negotiations, delays in commencing the research, deteriorating relationships, and even an end to the project. Recognizing the need for some kind of standards for and streamlining of the subaward process, the Federal Demonstration Partnership (FDP) assembled a task force to craft a common set of terms and conditions that most institutions could accept. Such troublesome issues, such as limitations that some states put on indemnification, arbitration, and sovereign immunity, were addressed so that all parties to the agreement would be satisfied with the protections given.
The basic approach to standardizing and streamlining the subaward agreement was to defer most “contractual” issues to the general regulations that govern federal awards (originally OMB Circulars A-110, A-21, and A-133, now Uniform Guidance) and include the appropriate document by reference, rather than restating them in a litany of flow-down clauses within the subaward agreement.

Another goal of the subaward template form is the incorporation of common, compromise provisions that all parties can use without changing the language. This reduces the time needed to review and negotiate each contract, and streamlines the subaward process.

Acknowledging that awards can have special terms and conditions, or pass-through entities can be subject to specific state requirements that must be part of a subaward agreement, the FDP task force built flexibility into its model document by incorporating into it several different Attachments to address prime award specificity. By moving prime award specific provisions to a separate attachment, general agreement was reached among institutions on the standard terms and conditions.

The FDP templates offer institutions many benefits. The FDP Subaward Template has been developed and vetted for federal awards over many years by member institutions and agencies. The result is a streamlined, standard set of terms and conditions that have been widely accepted, comply with federal regulations and policies, and enable expedited review and negotiation of routine subawards between member institutions. Because of these widely recognized benefits, the FDP subaward templates are used by both member and non-member institutions.

Update for Uniform Guidance
In response to the implementation on December 26, 2014 of the OMB Uniform Guidance Final Rule (2 CFR part 200) “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,” the FDP has revised its subaward agreement templates. While these templates were designed for use by FDP member organizations in collaborating with each other, they may be used by any FDP or non-FDP member institution. It is the pass-through entity’s responsibility to ensure all required terms and conditions flow down from a prime award to a subrecipient. All templates are under continuous review, and attachments are updated as agency regulations are released.

Elements of the FDP Subaward Agreement Form
The current FDP forms can be found on the FDP website: www.thefdp.org  Institutions should check the website frequently to ensure use of the latest versions of the forms. All templates are updated annually through the efforts of a working group. Revised versions will be posted to the FDP Subaward Agreement Forms page in September, or as needed to address changes in Federal requirements. Please check there for the most recent versions before using the templates to develop any subaward agreement. The template consists of a facepage and several attachments. There are several guidance documents and Frequently Asked Questions available for the templates on the FDP website. FDP members can stay up to date by joining
the FDP Subawards Listserv. A listserv request form is also available on the website.

**Subaward Agreement Forms**

The facepage and Attachment 2 include all of the required Uniform Guidance data elements and other standard required information, including:

- identification of the parties and principal investigators;
- prime award information, including award number, FAIN, date, award amount, and *Catalog of Federal Domestic Assistance* (CFDA) number and title;
- awarding agency;
- subaward project title, period, total funding, and funding increment for this award action; and
- References to Attachments for reporting, FFATA, and cost sharing.

**Terms and Conditions**

The standard terms and conditions of the subaward are found on the facepage, and should not be modified from the original document. These terms have been extensively vetted by the FDP membership to be compliant with current federal regulations and to include just the minimum amount of oversight required for the subrecipient to understand its responsibilities and for the pass-through entity to manage the subaward. A discussion of the issues addressed in the agreement follows.

**Payment**

The payment mechanism of the subaward is not dependent upon the type of the prime award; but, rather, should be determined by the pass-through entity based on the activity type, ability of the subrecipient to manage a cost reimbursable agreement, and the approval of the Federal agency when required (see 2 CFR 200.332 and applicable agency regulations). The FDP has a separate fixed price facepage template, which should be used when issuing a fixed price subaward.

The PTE has the option of referencing the subrecipient’s proposal or attaching a scope of work in Attachment 5. If changes need to be made to either the scope of work or the budget, institutions might prefer to attach the revised statement of work and/or revised budget to the subaward. Some institutions simply feel more comfortable with these matters spelled out, so they use Attachment 5 all the time. Inclusion of these items within the four corners of the award document can clarify any potential confusion where revisions were necessary.

It is legally important to identify the collaborator as an independent entity, which clarifies the relationship for tax and workers’ compensation purposes. This also makes clear that each party is acting on its own authority only — neither speaks for the other nor can make any commitments on behalf of the other party.

A monthly invoice is a standard payment mechanism for a cost-reimbursable subaward. Monthly invoicing is common practice; however this clause allows for less frequent invoicing if both parties agree. Monthly invoicing allows the PTE to more closely monitor both the technical progress and spending, and allows the sub-
recipient to be paid more timely and maintain cash flow.

The subrecipient has flexibility in the format of the invoice they provide, as long as it includes invoice data elements as required in Uniform Guidance, including current and cumulative costs being billed for major budget categories. The subaward terms strictly require the subrecipient to provide the subaward number on the invoice, which allows the pass-through entity to track invoices back to the prime award. Subrecipients are also tasked with the responsibility to certify the truth and accuracy of each invoice.

The final invoicing process is addressed specifically in the facepage. The subrecipient must identify the final invoice as “final” and submit it to the PTE within 60 days of the end date of the subaward. Uniform Guidance requires that final invoices on prime awards must be submitted within 90 days of the end of the award, so the university must have the final subaward invoice in hand soon enough to give it time to prepare its final financial report to the agency. (See 2 CFR 200.343(a)) Some Federal agencies, including NIH, have extended the final invoice submission deadline to 120 days. The 60-day limit is a compromise arrangement that allows the subrecipient a reasonable time to complete its records, while also giving the pass-through entity enough time to prepare its final financial report including all subaward costs. For close-out purposes, the final invoice is considered the final financial report from the subrecipient.

While the prime grantee has overall responsibility for the project, it would be an onerous financial liability to the pass-through entity to assume financial risk for the entire project. The grantee requires the collaborator to be responsible for its proper stewardship of Federal funds. Thus, just as the Federal government reserves the right to be reimbursed for illegitimate expenses made on grants and discovered during audits, the PTE reserves such a right with respect to the subrecipient’s use of funds.

**Technical Reports**

The principal investigator/project director (PI/PD) is the individual who takes responsibility for measuring the technical progress of the project, and is responsible for reporting technical progress to the Federal awarding agency. This “measurement” takes into account the amount of work done relative to the time frame of the project, technical and financial progress towards achieving the proposed outcomes of the project, and the quality of contributions made to the project. Likewise, the PI/PD of the subaward reports technical developments to the grantee, and coordinates experimental design in accordance with the scope of work being conducted at his/her institution. Any additional reports are listed in Attachment 4, where the PTE can choose from a list of commonly required reports or include additional requirements.

The FDP Subaward Agreement provides a structure for effective communications and reporting. PI/PDs on both sides need to keep research administrators informed if a change in the scope of work is anticipated or if difficulties in working arrangements between investigators arise.
Changes
The two parties to the agreement must work together in making changes in the relationship or in the project’s scope. This clause prompts personnel at both institutions to alert the proper contacts when the terms and conditions of the agreement change. Severe damage can be done to projects and relationships when investigators initiate “stop-work orders,” changes to the scope of work and funding levels, or the like, without first involving their respective research administrators and following proper legal protocols.

Any changes to the subaward require the written approval of each party. Because of the large number of administrative modifications issued during the course of a project, the FDP has further reduced burden on each party by authorizing the use of unilateral modifications, if both parties agree. Unilateral modifications would be issued by the pass-through entity only for simple, non-substantive changes, including no-cost extensions, incremental funding, or administrative changes. By offering unilateral modifications, the parties can expedite the turnaround time for modification execution.

Indemnity
The issue of indemnity involved extensive negotiations by the task force working on the model agreement, in light of the wide variety of restrictions on and needs of different kinds of institutions. Many state institutions are prohibited by state law from indemnifying or agreeing to hold another party harmless in contracts. Yet institutions need some protection against wrongful acts by subrecipients.

The template includes a requirement for each party to be responsible for their own negligent acts or omissions. This compromise clause provides a reasonable solution to the needs and concerns of the parties; troublesome language like “indemnify” and “hold harmless” are avoided. The clause requires that each institution take responsibility for events within its control yet recognizes that there may be legal limits on the level of liability (such as sovereign immunity in the case of certain state institutions). This clause has proven to be well received by all types of institutions.

Termination
Sometimes projects unravel, investigator relationships sour, institutional capabilities change significantly, or key personnel become unavailable to work on the project. In these cases or other similar events, there must be a provision for either party to “gracefully” back out of the collaboration. The reference to Uniform Guidance in the provision is a good example of how the subaward agreement itself does not have to provide extensive coverage of every topic relating to a subaward. The subaward agreement references other documents as appropriate.

One expanded authority of the pass-through entity that does not automatically flow down to the subrecipient is granting time extensions. Requests for time extensions must be submitted by the subrecipient with enough lead time so that the request can be considered by the pass-through entity, who in turn can submit notification or a request within the time frame as required by the granting agency’s guidelines.
Official Signatures

Signature boxes for the pass-through entity and subrecipient appear on the bottom of the first page of the model subaward. The signatures should be those of the same persons who are identified in Attachments 3A and 3B as the authorized officials for each party.

Attachments

The remainder of the model subaward agreement form consists of five attachments, which are to be included in the subaward document as appropriate. The attachments are as follows:

◆ Attachment 1 contains special certifications and assurances that are required to be specifically spelled out verbatim in all subawards, the requirement for audit in accordance with Uniform Guidance, and a general use of name clause indicating that neither party will use the name of the other without prior approval.

◆ Attachment 2 lists agency-specific terms and special conditions. Attachment 2 is a “smart form,” and it changes based on which agency issued the prime award. Attachment 2 also includes other clauses that cover special topics, such as compliance issues like Institutional Review Board (IRB) and Institutional Animal Care and Use Committee (IACUC) approvals, Financial Conflicts of Interest (FCOI) requirements, and intellectual property terms. Special conditions that are required to be flowed down to the subrecipient can also be included in Attachment 2. Pass-through entities are cautioned to only include the minimum necessary special conditions in accordance with the prime award. Additional “institutional” terms and conditions, such as insurance or governing law, should not be added unless explicitly required by a state law. A pass-through entity may also use Attachment 2 to include a copy of their prime award to the subrecipient, properly redacted, although it is not a requirement to do so.

◆ Attachments 3A and 3B gives contact information for both institutions, and FFATA reporting information.

◆ Attachment 4 contains a list of optional reporting requirements. Any special reports that may be required may also be included.

◆ Attachment 5 contains the scope of work and budget, if the pass-through entity chooses to include them rather than to refer to them by date on the facepage. There are different versions for cost-reimbursement and fixed price subaward agreements.

Sample agreements designed specifically for use with international collaborators are available as well. Sample modification templates are also included, as are numerous guidance documents and frequently asked questions.

The FDP is continually working to improve the usability and efficiency of the template forms, as well as keep them updated with ever-changing regulations. Visit the FDP subawards form webpage often for updates.
Restricted Uses
The subaward agreement template should not be used for contracts or other procurement mechanisms. FDP has created a sample subcontract template, which was designed with much more flexibility in which clauses should be included. The clauses included in the subcontract have been reviewed and discussed by the FDP community, and although the language used in the suggested terms and conditions reflect general agreement, the pass-through entity is free to draft a subcontract consistent with the requirements of its prime contract as well as any institutional policies or state laws.

FDP members are required to use the templates as designed and approved by the community, without unnecessary changes. Although non-FDP member pass-through entities are welcome to use the templates, any changes made should be done sparingly, and such deviations should be justified to the subrecipient.

13705.7 Subrecipient Monitoring
Once the subaward agreement is signed, the most vital and complex subaward work begins. As a recipient of Federal funding, the pass-through entity takes on the responsibilities normally assigned to a Federal agency. As required by Uniform Guidance, recipient institutions need to have written policies and procedures to ensure that they are providing proper oversight of subrecipients and meeting monitoring requirements.

In addition to making a determination that a collaborator is considered a subrecipient, and assessing the subrecipient’s risk of noncompliance with Federal regulations, as discussed previously in this chapter, the pass-through entity is also required to monitor the activities of the subrecipient to ensure that the subaward is “used for authorized purposes, in compliance with Federal statutes, regulations and the terms and conditions of the subaward, and that subaward performance goals are achieved.” (See 2 CFR 200.331(d)) Such monitoring must include:

◆ Reviewing financial and performance reports required by the pass-through entity.

◆ Verifying that every subrecipient is audited as required by Subpart F of Uniform Guidance in accordance with §200.501.

◆ Issuing a management decision for audit findings pertaining to the Federal award provided to the subrecipient from the pass-through entity, as required by §200.521 Management decision.

◆ Following up and ensuring that the subrecipient takes timely and appropriate action on all deficiencies detected through audits, on-site reviews, and other means, as pertain to the Federal award provided to the subrecipient from the pass-through entity.

Uniform Guidance instructs institutions that it may be reasonable to perform different levels of monitoring depending on the risk assessment determination made by the pass-through entity (See §3705.4, Risk Assessment). Many institutions have a tiered monitoring system which includes different requirements for low
risk institutions (e.g. most FDP institutions) and high risk institutions (e.g. foreign organizations or small businesses). Depending upon the pass-through entity’s assessment of risk posed by the subrecipient, Uniform Guidance suggests a number of monitoring tools that may be useful for the pass-through entity to ensure proper accountability and compliance with program requirements and achievement of performance goals, including:

◆ Providing subrecipients with training and technical assistance on program-related matters

◆ Performing on-site reviews of the subrecipient’s program operations

◆ Considering whether the results of the subrecipient’s audits, on-site reviews, or other monitoring indicate conditions that necessitate adjustments to the pass-through entity’s own records.

◆ Considering taking enforcement action against noncompliant subrecipients as described in §200.338 Remedies for noncompliance of this part and in program regulations.

The extent to which a pass-through entity should use any of these techniques is determined by the level of risk each subrecipient presents. For instance, when dealing with other research institutions that regularly receive Federal awards and that have “clean” audit histories, site visits are probably not needed. However, if one is dealing with a small organization who has very little Federal funding or a newly established not-for-profit organization that has been set up specifically to respond to a particular need that the sponsored project addresses, a much higher level of inspection and monitoring is reasonable. See Uniform Guidance §200.425 for information on allowable costs for audit services for the pass-through entity.

**Federal Funding Accountability and Transparency Act (FFATA) Reporting**

The Federal Funding Accountability and Transparency Act (FFATA) was signed into law on September 26, 2006 by President George W. Bush as a way to hold the government accountable for spending allocations. It requires all entities and organizations receiving federal funds to disclose their funding via USASpending.gov. This is a publicly available, searchable website allowing individuals to drill down by entity, geographical region, award, or even individual transaction, to see where tax dollars are being spent.

Prime awardees of federal funds, whether in the form of federal assistance awards or contracts, are required to report on their first-tier subrecipients. Effective October 1, 2010, pass-through entities were required to submit FFATA reports via the FFATA Subaward Reporting System (FSRS). In turn, the data reported in FFATA reports are made publicly available in USASpending.gov.

New financial assistance awards issued on or after October 1, 2010 and awarded $25,000 or more are subject the FFATA reporting requirements. The pass-through entity is required to ensure the applicable subaward has been reported by the end of the following month in which the pass-through entity awards any subaward greater than or equal to $25,000. Federal contracts work in the same manner, however,
pass-through entities are required to file FFATA reports by the end of the month following the month in which the prime contractor awards any subcontract greater than $30,000. In addition, FFATA requires the names and total compensation of the five most highly compensated officers of the entity(ies) if in the preceding fiscal year received 80 percent or more of its annual gross revenues in federal awards; and $25,000,000 or more in annual gross revenues from federal awards; and the public does not have access to this information about the compensation of the senior executives of the entity through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. §§ 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. See FFATA § 2(b)(1) Internal Revenue Code of 1986. All three conditions must be met in order to be required to report this information.

Prime awardees need to consider how they will track awards subject to the FFATA reporting requirements. The Notice of Award issued from the prime sponsor will indicate if the award is subject to FFATA reporting. Some institutions have developed tracking mechanisms using Excel spreadsheets, others have found ways to flag subawards and subcontracts issued subject to FFATA reporting in their grants management systems. Usually individuals who issue subawards are involved with FFATA reporting; however, your organization may choose to assign the responsibility to an individual to submit the reports through FSRS. Regardless of who is assigned to submit FFATA reports and how they are tracked, the reports must be submitted via FSRS in a timely manner. FFATA reporting has traditionally been audited during a Single Audit. Auditors may request a sample of FFATA reports corresponding to subawards and subcontracts issued, where auditors will verify the reports were submitted on time and accurately.

Many resources exist on the FSRS website to educate an institution about the FFATA reporting requirements. FAQs can be found on the home page at https://www.fsrs.gov/. Other resources exist at https://www.fsrs.gov/resources. The FDP has created a listserv for member institutions to share best practices in FFATA reporting. Members can request to be added to the listserv using the mailing list request form at http://sites.nationalacademies.org/PGA/fdp/PGA_055510.

**Audit Procedures**

Uniform Guidance makes clear in Subpart F what is expected of an institution’s policies and procedures with regards to subrecipient monitoring. Institutions should review Subpart F to ensure their subrecipient monitoring policies are sufficient to pass audit. The following topics give a good idea of what may be reviewed by auditors with respect to a pass-through entity’s subrecipient monitoring activities.

**Written Policies and Procedures**

An institution should have written policies and procedures dealing with subrecipient monitoring. If an institution does not have any such policies, developing a set of policies should be an immediate priority. Your institution’s internal auditing group may have suggestions, or institutions can review the policies of other institutions. A number of institutions present excellent models for developing policies and procedures. A comprehensive policy covers risk assessment of subrecipients, including
a number of factors to measure when assessing risk. The policy defines the different roles and responsibilities for each level of research administration involved in subaward management. It describes what is necessary for reviewing invoices, and when and how to make site visits, determine Uniform Guidance compliance, and request audits. An effective policy anticipates what the auditors will be looking for, and documents how the pass-through entity performs its monitoring tasks.

Even if you already have written polices, it would be wise to review them from time to time for currency and relevancy. It is not enough to have policies and procedures in place, however. Institutions must ensure that PIs and research administrators know what the policies are and for which duties each is responsible.

**Documentation of Monitoring Activities**

An institution should be aware of what documentation is being collected regarding the subrecipient’s current and past performance, both programmatically and financially. If such data is not being collected and maintained by the OSP, an institution should create a central database or repository to collect this information or know where such information can be found readily. This information can be decentralized and located with the PIs and departments, or held in a central research financial or accounting office. The documentation of monitoring activities should be clearly outlined in the institution’s subaward policies.

**Corrective Action**

Occasionally, research work at the subrecipient institution is not going as proposed or anticipated, and corrective action may be needed. PIs often will be the first to pick up on something that’s not quite right about a subrecipient’s conduct. For example, a PI might determine that travel is being charged for data collection during at-home interviews of research participants, but no reports of these interviews are coming in. A brief investigation might reveal that students conducting the interviews are failing to transcribe and report on their interviews, yet continue to make trips and charge for travel. The PI might then work with the investigator at the subrecipient institution to arrange to pay for some extra help to document the interviews in a more timely fashion. In cases where a problem arises and is addressed, there should be measures written into the lead institution’s policies and practices for monitoring that the “fix” is working. If red flags or discrepancies with the budget are found on the invoice, the PI may request additional information on how the expenses support the scope of work of the project or backup to support the invoice. Such corrective actions should be documented, including information about the problem, what determination was made for correction, and whether the corrective action has been followed and is successful.

**Ensure Subrecipient Compliance**

Institutions must make sure staff who are responsible for ensuring subrecipient compliance are well trained in using and understanding information in the Federal Audit Clearinghouse (FAC). To document that the subrecipient does not have any negative audit findings that would impact their ability to manage federal funding,
many institutions archive a copy of the subrecipient FAC information. If there is a finding, be sure to follow up with the institution to ensure corrective action is in place, and document the action.

An institution’s policies and procedures need to address specifics on both management decisions and subrecipient corrective action to demonstrate the institution’s timely response to negative findings concerning the subrecipient’s management of grant funds. Using the excuse that “well, the federal government will take care of that (or already has) because the other institution is still getting grants from the NSF” does not obviate the institution’s responsibilities in this area. Auditors will be looking for what the lead institution did to ensure that corrective steps were taken, not what NSF did or did not do. The pass-through entity also may have to impose sanctions when a subrecipient is unresponsive, even in cases where the federal agencies themselves have not followed up.

13705.8 Subaward Closeout

At the end of the subaward period, the institution must follow the same basic steps that Federal agencies use when closing out grants. The pass-through entity is required to close-out the subaward when it determines that all applicable administrative actions and all required work have been completed by the subrecipient. The subrecipient must submit a final financial statement (or final invoice), technical report, invention report, and property report according to the specifications in the terms and conditions of the subaward agreement. The pass-through entity is responsible to the sponsoring agency for sending in all the subaward closeout information with its closeout.

When using the FDP Subaward Agreement, all closeout matters should be addressed in Attachment 4, “Reporting Requirements.” It is the responsibility of the pass-through entity to inform the subrecipient of the proper report format for each required report selected on Attachment 4.

Once the materials are received, the pass-through entity PI and department review the final technical report and invoice. If satisfactory, the PI incorporates the subrecipient’s report on findings or performance into the final grant report. The invoice is sent to the appropriate institutional office to make the final payment. Most institutions require a certification of technical completion be provided by the PI to the proper institutional office prior to paying the subrecipient’s final invoice. If the subrecipient’s report is not satisfactory, then the PI needs to work with the subrecipient’s PI to make it so. If proper monitoring of technical performance has occurred throughout the life of the subaward, there should not be any surprises upon receipt of the subrecipient’s final technical report. If the final report is not satisfactory, the pass-through entity PI should put a hold on payment of the final invoice until the work (and report) is satisfactorily completed. The institution may request a time extension for submission of the final report if necessary.

The pass-through entity must ensure that the subrecipient performs the same closeout actions as are required of the pass-through entity. Uniform Guidance pro-
vides instructions in §200.343:

a. Submit, no later than 90 calendar days after the end date of the period of performance, all financial, performance, and other reports as required by the terms and conditions of the subaward.

b. Liquidate all obligations incurred under the subaward not later than 60 calendar days after the end date of the period of performance as specified in the terms and conditions of the subaward.

c. Pass-through entity must make prompt payments to the subrecipient for allowable reimbursable costs subaward being closed out.

d. Promptly refund any balances of unobligated cash that the pass-through entity paid in advance or paid and that are not authorized to be retained by the subrecipient for use in other projects. (See §200.345 Collection of amounts due, for requirements regarding unreturned amounts that become delinquent debts.)

e. Pass-through entity must make a settlement for any upward or downward adjustments to the Federal share of costs after closeout reports are received.

f. Account for any real and personal property acquired with Federal funds or received from the Federal Government.

g. Pass-through entity should complete all closeout actions for Federal awards no later than one year after receipt and acceptance of all required final reports.

In lieu of a closeout audit of a subaward, the pass-through entity can perform a desk review of all costs to determine allowability of expenditures and record this in a letter to the file called an “Administrative Closeout Memorandum.” depending on the level of risk assigned to the subrecipient, the nature of the program, or the results of a subrecipient’s audits, the pass-through entity may conduct a formal audit if it deems it appropriate.

13705.9 Conclusion

Although issuing subawards and performing subrecipient monitoring has always been a requirement under Federal regulations, the increased emphasis by auditors and agencies on ensuring proper stewardship of Federal funds has in many ways made the collaboration process more onerous. Uniform Guidance attempted to provide clarity as to what is and is not required by pass-through entities. Until we see the interpretations of OIG offices and independent auditors, the clarity of that guidance remains unknown. Efforts by organizations like FDP have worked to streamline the subaward process, and to bring universities together in order to discuss best practices, share policies, and unite in a common understanding of the changing regulatory landscape.
Supplementary Material

This section includes expanded coverage of topics relating to managing subawards. These materials are culled from a variety of authoritative sources.

Subrecipient Monitoring: Recent Audit Findings

Both the National Science Foundation (NSF) and Department of Health and Human Services (HHS) Offices of Inspector General (OIG) have audited prime grantees for their subrecipient monitoring policies and procedures, as well as the subrecipients themselves to determine whether they claim allowable costs in compliance with the terms and conditions of the award and federal regulations. Like their pass-through entity, subawardees must safeguard and properly expend federal funds according to A-133, but the prime recipient is ultimately responsible for the actions of its subrecipients.

A review of findings in the OIG audit reports involving subawards (see Figures 3720.1-1 and 3720.2-1) can be instructive in assisting institutions develop effective internal controls and policies in the area of subrecipient monitoring.

Requirements Flow from A-133. Among their responsibilities (see ¶3705.7), pass-through entities are required by Subpart D of Circular A-133 to do the following:

◆ Advise subrecipients of requirements imposed on them by federal laws, regulations, and the provisions of contracts or grant agreements as well as any supplemental requirements imposed by the pass-through entity.

◆ Monitor the activities of subrecipients as necessary to ensure that federal awards are used for authorized purposes in compliance with laws, regulations, and the provisions of contracts or grant agreements and that performance goals are achieved.

◆ Ensure that subrecipients expending $500,000 or more in federal awards during the subrecipient’s fiscal year have met the audit requirements of this part for that fiscal year.

◆ Issue a management decision on audit findings within six months after receipt of the subrecipient’s audit report and ensure that the subrecipient takes appropriate and timely corrective action.

◆ Consider whether subrecipient audits necessitate adjustment of the pass-through entity’s own records.

Audits of subrecipients have found many of the same problems that surface in audits of prime grantees — unsupported labor costs, unallowable cost transfers, direct costs without supporting documentation, unsubstantiated cost sharing, and late reports. In one audit, the HHS OIG recommended that the prime grantee be responsible for making the financial adjustment for the costs overstated by the subrecipients. In many audits, neither the pass-through entity’s nor the subrecipient’s policies and procedures were adequate to properly manage and monitor the subrecipient funds.
Documents/Reviews. In many of the subrecipient audits, auditors requested the following documents and conducted the following reviews:

◆ Requested subaward documents, and university policies and procedures for pertinent terms and conditions

◆ Requested detailed ledger transaction listings, labor distribution records, personnel records, and supporting documents on costs claimed

◆ Reconciled costs claimed by the university with accounting records

◆ Reviewed charges distributed through payroll distribution procedures and reconciled salary and wage charges with supporting records and semi-annual effort certification reports

◆ Reviewed proposed and actual levels of effort of a key employee for differences

◆ Ascertained the appropriateness of fringe benefit and indirect rates that the university used

◆ Reviewed subrecipient purchasing and recharge center procedures and tested and verified selected direct costs (i.e., for materials, supplies, equipment, and travel) to source documents
Reviewed report filing dates to determine timeliness

The NSF OIG auditors questioned costs in one audit because, while business managers compared invoices signed by a fiscally responsible person at the subawardee to the budget, they did not require supporting documentation with invoices, and NSF auditors determined that this invoice-to-budget methodology was not adequate to ensure accuracy of the costs. Auditors also faulted the university for not conducting on-location financial monitoring.

Internal Controls. Although the circular is not specific as to what actions a university needs to take to meet the monitoring requirement, auditors, at times, appear to require on-site visits and other specific tasks that universities contend are not mandated.

Both NSF and HHS OIG audits have been critical of the internal controls universities have in place to fulfill their pass-through obligations. Audits have found controls inadequate because subrecipient costs were not separately tracked for each subawardee, but were commingled with other types of service costs, or because the university did not have a centralized location for subawardee agreements, contact information, budget, invoices, and other cost information.

In a number of NSF audits of subrecipients, the OIG recommended that the university establish a risk-based system for monitoring and reporting subaward costs. It recommended that the university develop and implement written policies and procedures to assess and document each subawardee’s risk of claiming non-allocable or non-allowable costs, including cost sharing expenditures, and, based on these assessments, perform periodic reviews of each subawardee’s invoices.

HHS, in its audits, also looks for evidence of assessment of the subrecipient’s risk with regard to managing the federal funds. Finally, both NSF and HHS have faulted universities for not reviewing the subrecipients’ A-133 audits, even if the subrecipient has validated the results.

Risk Assessments. Routine, fiscal subaward oversight that includes risk-based evaluation and monitoring could prevent or identify unallowable claimed subaward costs, according to findings in several of the audit reports. Auditors cited one university for failing to conduct risk assessments prior to selecting subawardee institutions. (See also Figure 3720.1-2.) Several audit reports discussed the importance of having a formal process for ongoing risk assessments as part of effective subrecipient monitoring practices. For example, in one audit report, the auditors suggested that a plan could include “performing effective annual reviews of a subawardee’s A-133 audit report; obtaining supporting documentation; and performing desk reviews and site visits.” In another audit, it was recommended that a risk-based approach to subawardee monitoring be sued to determine which monitoring procedures are most appropriate for a particular awardee.

Relying on the controls and self-assessments made by the subawardees was insufficient, according to the report. Another report noted that a reliance on a subawardee’s Circular A-133 audit to provide “assurance that subawardees will comply
Background. The NSF OIG conducted an audit covering calendar years 2004 through 2008 and looked at five NSF awards totaling just under $15 million, about 13% of the university’s total NSF funding. Three of the five awards selected were collaborative in nature and included 11 subawards totaling $9.2 million, approximately 61% of the total costs charged to NSF for the period. (Link to the audit: www.nsf.gov/oig/10_1_006_UM.pdf.)

Risk Assessment Process Faulty. Auditors found problems with how the university’s controller’s office conducts the risk assessment. University policy requires the controller’s office to send a Subrecipient Confirmation Letter to each subrecipient to gather information in order to conduct a risk assessment of the subawardee. In the Subrecipient Confirmation Letter, the subawardee states whether or not it must have an A-133 single audit and certifies that the A-133 audit showed no material instances of noncompliance, material weaknesses, and/or reportable conditions “relating to federal awards provided by the University.” If there are findings relating to the university, the subawardee provides a copy of the audit.

The Subrecipient Questionnaire is used only if the subawardee is not subject to an A-133 single audit (i.e., receives less than $500,000 in federal funds), which is rare.

The audit found that when the controller’s office believes it can get the information it needs from alternative information sources, it does not require the subawardee to submit a Subrecipient Confirmation Letter or a copy of its A-133 audit. Instead, the controller routinely uses information from the subawardee’s A-133 Data Collection Form, which provides a summary of A-133 audit results but no details regarding specific findings (see http://harvester.census.gov/sac).

The controller’s office uses information from the Subrecipient Confirmation Letter or the Data Collection Form to complete a Risk Assessment Worksheet. The worksheet contains a series of questions, but the auditors noted that neither the confirmation letter nor the subrecipient questionnaire provided the information needed to answer the questions.

Without the confirmation letter, the auditors pointed out, there is “no representation from the subawardee that could validate the on-line Federal Audit Clearinghouse data form. Further, without the audit report, the nature of any findings, such as inadequate payroll, procurement or cash controls, or inaccurate financial reporting, cannot be determined. These findings, while not necessarily specific to a University award, nonetheless affect the risk of proper award management.”

Potential Internal Control Risks. The controller’s office had rated all subawardees tested in the audit as low-risk because none of the findings related to the university’s awards. But the auditors uncovered several instances of A-133 findings that while not related to university awards, represented potential internal control deficiencies in payroll, procurement, bank reconciliations, inadequate segregation of duties, and inability to prepare financial statements.

One of the subawardees was incorrectly rated as low-risk, even though a theft of $11,766 from an NSF award due to improper use of a procurement card had been reported on the A-133 audit. The audit of another subawardee reported an unreconciled bank balance that required a $3.6 million adjustment.

with significant award terms and conditions” is insufficient. In one report, the auditors said the results of risk assessments of potential subawardees should be better documented. It was also important, according to the auditors, to document the “rationale” to support the level of monitoring activities.
**Figure 3720.1-2: Subaward Audit Case Study — Risk Assessment, continued**

In another instance, one of the two Subrecipient Confirmation Letters that had been returned stated, “Material instances of noncompliance, material weaknesses and/or reportable conditions were found relating to federal awards provided by the university,” but that sentence had been manually crossed out, and the Risk Assessment Worksheet for the subawardee noted only that recurring prior findings, “were not related to funding provided by [the university].” No additional information supporting this determination was provided, and the subawardee was rated low-risk.

**Review Other Agency Audits.** Another problem with the risk assessment process, according to the audit, was that university policies and procedures require review of a subrecipient’s A-133 audits but do not address other audits that might be conducted by other agencies, such as OIGs, or by internal auditors. The auditors found that two subawardees had audits that identified material internal control weaknesses that could affect their ability to report costs accurately. These results, had they been reviewed during the risk assessment process, would likely have prompted the assignment of a higher risk category to these subawardees.

**OIG Recommendations.** The auditors emphasized how critical the risk assessment process was to designing a subaward monitoring plan and recommended that the university do the following:

- Send a Subrecipient Confirmation Letter and Subrecipient Questionnaire to all subawardees at least annually.
- Request and thoroughly review A-133 audit reports as well as other audit reports.
- Document the reason for the assigned risk assessment level on the Risk Assessment Worksheet.
- Require supervisory personnel to review the risk assessments.

**University Response.** Other than the supervisory review of risk assessments, the university did not concur with the audit conclusions on subrecipient monitoring. Its policies and procedures, the institution said, comply with A-133 and its A-133 auditors have found its subrecipient monitoring procedures adequate and in compliance with the circular.

The auditors responded that they do not agree with the university’s assessment. While the university’s written policy to send a Subrecipient Confirmation Letter to all subawardees and obtain copies of A-133 audits is acceptable, the controller’s office does not always follow this policy. Reliance solely on the information provided in the Data Collection Form is not sufficient, they said, because the information provided there is limited.
Disclosing Federal Subaward Information: FFATA Compliance

Understanding the Federal Funding Accountability and Transparency Act (FFATA) is important to research administrators because federal agencies require awardees to provide much of the needed data as a condition of receiving federal financial assistance, and awardees are responsible for updating the database with subaward and subcontractor information.

FFATA required establishment by January 1, 2008, of a single searchable website accessible by the public for free that includes for each federal award:

- The name of the entity receiving the award.
- The amount of the award.
- Information on the award including transaction type, funding agency, etc.
- The location of the entity receiving the award.
- A unique identifier of the entity receiving the award.

Implementation and Oversight. The Office of Management and Budget (OMB) heads the task force in charge of implementing FFATA, including issuing regulations to do so. OMB, in its oversight role implementing both the American Recovery & Reinvestment Act of 2009 (see ¶120.2) and FFATA, harmonized the subaward reporting as mandated under both statutes. (For a comparison of reporting requirements, see Figure 3720.2-1 on page 3720:11.)

Guidance on Reporting

OMB was unable to get a subaward reporting system in place by the deadline set down in FFATA, January 2009. Finally, OMB announced in April 2010, in a memorandum on “open government and transparency,” that beginning October 1, 2010, federal agencies will be required to initiate collection and reporting of information on subawards as required by FFATA.

In addition to containing the initial FFATA guidance, OMB’s memo requires federal agencies to improve the timeliness, completeness, and accuracy of the ongo-

### Reporting Overview

FFATA, signed into law in September 2006, requires “the full disclosure of entities or organizations receiving federal funds beginning in fiscal year 2007.” Specifically, the law requires the federal government to create and maintain a single searchable website that includes and makes downloadable specific data elements about most federal awards. The website containing prime award data is USAspending.gov. Subaward data is to be reported within 30 days of award and in the same format as primary award data. Subaward reporting is done using the FFATA Subaward Reporting System at www.fsrs.gov. The information will then be publically accessible at USAspending.gov.
ing reporting of direct federal awards at USAspending.gov. OMB also issued guidance containing specific instructions on the subaward reporting on August 27, 2010. Both guidance documents are available at the OMB Open Government site at www.whitehouse.gov/omb/open.

**FAR Rule.** The subcontract pilot program was implemented through the Federal Acquisition Regulation. The Department of Defense, the General Services Administration, and NASA published a rulemaking establishing the subcontractor data collection pilot in the September 6, 2007, Federal Register. These agencies published an interim rule on July 8, 2010, amending the FAR and containing FFATA reporting requirements for federal contracts (http://edocket.access.gpo.gov/2010/pdf/2010-16691.pdf). The rule essentially institutionalizes the OMB April 6, 2010, memo on FFATA reporting.


**Compliance Supplement Now Addresses FFATA Reporting**

The 2011 edition of the OMB Circular A-103 Compliance Supplement contains, for the first time, a discussion of auditing for reporting on subawards as required by the Transparency Act. Subrecipient reporting under the act represents a new area of concern for auditors, and the Reporting (Section L) and Subrecipient Monitoring (Section M) sections of Part 3 of the supplement have been revised to add requirements related to FFATA reporting.

A new L.5 titled “Subaward Reporting under the Transparency Act” was added to each program and cluster in Parts 4 and 5 of the supplement to indicate whether this reporting is applicable or not applicable. The compliance supplement notes that reporting might not be applicable for several reasons. If the program has no subawards, of course, there is no subaward reporting required. Programs that are funded by ARRA are exempt from the FFATA reporting because Sec. 1512 of ARRA requires similar reporting. If a program has ARRA and non-ARRA funding, the supplement notes, only the non-ARRA funds are subject to the FFATA reporting requirements.

**Demonstrating ‘Good Faith Effort’**

The American Institute of Certified Public Accountants was provided a “final draft” of the 2012 OMB A-133 Compliance Supplement, as the agency announced late in May that the clearance process is taking longer than expected. (Although it is unlikely
that the official compliance supplement will vary significantly from this version, auditors are cautioned to use the draft only for planning purposes. The final draft is publicly available on AICPA’s Government Accounting Quality Center website at http://tinyurl.com/7bwm4ph.)

Certain major changes in this year’s supplement deal with Federal Financial Accountability and Transparency Act subrecipient reporting. Because the FFATA requirements for reporting on payments to subrecipients are relatively new and complex, recipients have encountered problems in meeting the requirements, and auditors have encountered problems in testing for compliance, according to OMB. As such, the compliance supplement’s Part 3L, Reporting, has been revised to provide clearer guidance on FFATA reporting. For example, the chart showing when FFATA reporting is required has been expanded considerably (see Figure 3720.2-1).

A new Part 3L subsection on “Good Faith Effort” has been added instructing auditors to look at the circumstances if they determine that the recipient has failed to adequately comply with the reporting requirements in steps 10 and 11 of Part 3L, which address FFATA. If the recipient can demonstrate a “good faith effort” to comply, auditors are not required to report audit findings. Good faith effort must be demonstrated by proper documentation, such as emails or phone logs of communications with the awarding agency or the General Services Administration, or screen shots of attempts to upload the information into the FFATA Subaward Reporting System (www.fsrs.gov).

Auditors also can use a demonstration of good faith effort in determining low-risk status of programs or recipients. Auditors are not required to consider findings in previous audits based on steps 10 or 11 of Part 3L if they determine the recipients made a good faith effort to comply. Language in the new section emphasizes that despite these accommodations, recipients are still required to comply with the FFATA reporting requirements, and auditors are encouraged to remind recipients of their responsibilities under FFATA.

**Reporting Specifics**

Data on prime awards come from the federal agencies and departments that make the awards and are posted by them. Federal agencies have up to 30 days to enter award information. Institutions may want to periodically verify the accuracy of information on their programs included at USASpending.gov. Research administrators report finding inaccuracies in the data agencies are submitting on their institutions.

Federal prime awardees must report on subawards they make: a prime grant awardee is required to report on its subgrants and a prime contract awardee is required to report on its subcontracts. Subaward reporting is done using the FFATA Subaward Reporting System at www.fsrs.gov. The information will then be publically accessible at USAspending.gov. Federal contractors and prime grant recipients are required to register at www.fsrs.gov before reporting.

Subaward data is required for first-tier subawards (i.e., grants, cooperative agreements, or contracts made to others by entities that received the funds directly from the federal government) of grants, cooperative agreements, contracts, and task-
and-delivery orders. The OMB April 2010 guidance defines a subaward “as generally referring to a monetary award made as a result of a federal award to a grant recipient or contractor to a subrecipient or subcontractor, respectively.”

FFATA subaward reporting on assistance programs currently is required only for first-tier subawards under assistance provided from the federal government through grants or cooperative agreements, but in the future, other types of assistance, such as loans and loan guarantees, may also come under the requirements. (FFATA subrecipient reporting is also required for first-tier subawards under federal contracts.)

Grantees. In accordance with 2 CFR Chapter 1, Part 170 Reporting Sub-Award and Executive Compensation Information, prime grantees awarded a federal grant are required to file a FFATA subaward report by the end of the month following the month in which the prime awardee awards any subgrant equal to or greater than $25,000. The grantee reporting requirements are outlined at www.fsrs.gov as follows:

This requirement is for both mandatory and discretionary grants awarded on or after October 1, 2010.

All subaward information must be reported by the prime awardee.

For new federal grants as of October 1, 2010, if the initial award is equal to or over $25,000, reporting of subaward and executive compensation data is required.

If the initial award is below $25,000 but subsequent grant modifications result in a total award equal to or over $25,000, the award will be subject to the reporting requirements as of the date the award exceeds $25,000.

If the initial award equals or exceeds $25,000 but funding is subsequently de-obligated such that the total award amount falls below $25,000, the award continues to be subject to the reporting requirements of the Transparency Act.

According to an FAQ posted at www.fsrs.gov, “to facilitate transparency of federal funds awarded through grants, OMB will consider future additional guidance related to the collection of subaward data. These may include capturing information about: procurements under grants, grant awardees’ costs other than sub-awards and procurements, and sub-awards under other types of federal financial assistance awards.”

Worth Noting?

The following is taken from the FAQs appearing on www.fsrs.gov:

Question: Does the agency have a requirement to ensure FFATA subaward reports have been submitted by the prime for grants the agency has awarded?

Answer: No. ... However, federal agencies are strongly encouraged to ensure the accuracy and data quality of the award information they report.
Further, with some limited exceptions, the reporting requirements apply to all prime awardees of federal grants, including foreign prime recipients and foreign subawardees.

**Contractors.** In accordance with Federal Acquisition Regulation clause 52.204-10 (Reporting Executive Compensation and First-Tier Sub-Contract Awards), prime contractors awarded a federal contract or order are required to file a FFATA subaward report by the end of the month following the month in which the prime contractor awards any subcontract (as of March 1, 2011) greater than $25,000.

The 2011 A-133 Compliance Supplement includes the following table, which explains the one difference between the two sets of reporting requirements for grantees and contractors (www.whitehouse.gov/omb/circulars/a133_compliance_supplement_2011; page III-L-8). (Apart from this difference, the reporting requirements are comparable.)

| DUNS Number | Required for recipients (referred to as contractors under the FAR) and first-tier subrecipients (referred to as subcontractors under the FAR) | Required for recipients and first-tier subrecipients | Required for contractors and first-tier subcontractors (may be required for subrecipients for purposes of A-133 audits) |
| CCR Registration | Required for recipients and first-tier subrecipients; not required for first-tier subcontractors under the FAR | Required for recipients; not required for first-tier subrecipients | Required of recipients; not required for first-tier subcontractors |
| What is reported | As required by Sec. 1512 of ARRA | Each first-tier subaward or action of $25,000 or more in federal funds IF the prime award was made on or after 10/1/2010 with a new Federal Assistance Identification Number (FAIN); does not include vendor payments by recipients or subawards to individuals | Each first-tier subcontract with a value of $25,000 or more in federal funds and any modification to that amount made on or after 10/1/2010 |
| Who reports it | Recipient OR may delegate reporting to first-tier subrecipients | Recipient information at CCR (www.ccr.gov); first-tier subrecipient information at FSRS.gov | Recipient information at CCR; first-tier subcontract information at FSRS.gov |
| Where is it reported | FederalSpending.gov | Recipient information at CCR (www.ccr.gov); first-tier subrecipient information at FSRS.gov | Recipient information at CCR; first-tier subcontract information at FSRS.gov |
| When must it be reported | By the 10th day after the end of the calendar quarter in which the award was made and similarly thereafter | By the end of the month following the month in which the funding occurred | By the end of the month following the month in which the funding or modification occurred |
| Requirement | OMB M-09-21, Questions 2.1 – 2.11 (www.whitehouse.gov/omb/asset.aspx?AssetId=1412) | 2 CFR part 170 and 75 FR 55663, 75 FR 39414 | 75 FR 39414 |

Figure 3720.2-2: Reporting on Subawards Under FFATA

The 2012 Compliance Supplement final draft offers the following guidance on FFATA subrecipient reporting at www.fsrs.gov.

<table>
<thead>
<tr>
<th>If the value of a first-tier subaward under a grant or cooperative agreement is...</th>
<th>and</th>
<th>then</th>
<th>by</th>
</tr>
</thead>
<tbody>
<tr>
<td>$65,000 in federal funds</td>
<td>the entire $65,000 is obligated on June 1, 2012</td>
<td>the $65,000 subaward obligation must be reported</td>
<td>July 31, 2012</td>
</tr>
<tr>
<td>$65,000 in federal funds</td>
<td>$23,000 is obligated at the time of the subaward, and two separate amendments subsequently obligate $30,000 on Oct. 1, 2012, and $12,000 on Dec. 30, 2012, respectively</td>
<td>only the $30,000 amendment obligation is required to be reported</td>
<td>Nov. 30, 2012</td>
</tr>
<tr>
<td>$24,000 in federal funds</td>
<td>after the initial obligation of $24,000, the subaward is subsequently amended to obligate an additional $25,000 on Sept. 15, 2012</td>
<td>the initial $24,000 subaward obligation is not required to be reported; however, the $25,000 amendment obligation must be reported</td>
<td>Oct. 31, 2012</td>
</tr>
<tr>
<td>$24,000 in federal funds</td>
<td>the entire $24,000 is obligated at the time of the subaward</td>
<td>no subaward reporting is required</td>
<td>....</td>
</tr>
</tbody>
</table>

**SOURCE:** 2012 Compliance Supplement (Final Draft), Part 3-L-8, http://tinyurl.com/7bwm4ph

**Familiar Data to Be Reported.** Data items to be reported for subawards greater than $25,000 are the following:

1. Name of entity receiving award
2. Amount of award
3. Funding agency
4. North American Industry Classification System code for contracts/Catalog of Federal Domestic Assistance program number for grants
5. Program source
6. Award title descriptive of the purpose of the funding action
7. Location of the entity (including congressional district)
8. Place of performance (including congressional district)
9. Unique identifier of the entity and its parent; and

10. Total compensation and names of top five executives (same thresholds as for primes)

Total compensation and names of the top five executives must also be reported if (1) more than 80% of annual gross revenues from the federal government, and those revenues are greater than $25 million annually; and (2) compensation information is not already available through reporting to the Securities and Exchange Commission.

Classified information is exempt from the prime and subaward reporting requirement as are contracts with individuals.

User guides, FAQs, and online recordings are available at the FSRS website to assist users. FSRS uses www.zip-codes.com as the source of the congressional district for the location of the entity and primary place of performance.

According to an FAQ posted at www.fsrs.gov, FSRS “takes an ‘awardee-centric’ approach allowing the prime awardee to manage (using their Awardee Worklist) and report against multiple contracts and/or grants awarded to their registered DUNS number. The awardee can sort and filter their worklist by type (i.e., contract or grant), by awarding agency, and by other filter terms. They will be able to see, by award number, the FFATA sub-award reports filed against that particular contract and/or grant.”
The Devil Is in the Details: Subrecipient/Vendor Identification

AIS editors

Colleges and universities are paying more and more attention to the distinction between a subrecipient of federal assistance funds and a contractor acting as a vendor to a federal funds recipient because misidentification has a significant impact on two key areas: single audits under OMB Circular A-133 and reporting under the American Recovery and Reinvestment Act and the Federal Funding Accountability and Transparency Act. In a recent interview, Robert M. Lloyd, a grants consultant, confirmed that “This is one of the most common areas of confusion I am seeing right now.”

Lloyd cites several sources for the confusion. First, there is a widespread misuse of terminology, which stems from a lack of clarity in some applicable guidance, he says. Grantees, and, in fact, federal officials, often refer to all subawards as subcontracts or use the even more ambiguous phrase “partner relationships.”

Lloyd also says an “abundance of caution” can contribute to the problem. For example, some lawyers who may be unfamiliar with the OMB circulars and other requirements often get involved when subaward documents are prepared and have a tendency to add language that would cover any conceivable eventuality, even ones that would not be appropriate to an assistance award or a contract for goods or services. Once language covering both types of instruments is inserted into the award document, its overall purpose becomes muddied, and it is much harder to determine whether it is a subaward or a contract.

The public policy requirements attached to the award documents are one example of where this happens. When a federal funds recipient awards a contract to a vendor, it must include eight contract provisions (outlined in Attachment A to Circular A-110) that cover areas such as anti-kickback and equal employment opportunity.

Subawardees, on the other hand, must comply with the policies in the standard statement of assurances (Standard Form 424B that is part of the application process and available at grants.gov) addressing 18 public policy areas. There is very little overlap between the two, but sometimes subaward documents have been drawn up with all of the provisions included, both those for subawardees and for contractors under grants, which is unnecessary and confusing. Lloyd also says that independent auditors and federal inspectors general sometimes believe they must guard against the possibility of a grantee manipulating the facts of the award to get out of the administrative and audit requirements associated with a subaward. They believe that if the award is not auditable, accountability is lost.

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Determination Affects Audit Scope

However, it is not the terminology or the public policy provisions, but the award itself, that determines what the funding instrument really is — what it is intended to do and how it is executed. Because different entities use different labels, it often is not clear what type of agreement is involved until multiple factors are examined.

A key determinant in deciding whether an award is a contract or a subaward, says Lloyd, is who benefits from the funds. The concept of who benefits is addressed in OMB Circular A-133 (covering single audits), in §__.210(b)(5), which states, “Characteristics indicative of a Federal award received by a subrecipient are when the organization … [u]ses the Federal funds to carry out a program of the organization as compared to providing goods or services for a program of the pass-through entity.”

The distinction between subawards (pass-through grants) and procurements under grants (contracts) has been an issue in single audits conducted under Circular A-133 as far back as 1997 when the circular was revised, according to Lloyd, because funds received as a recipient or subrecipient are subject to audit under A-133, while payments received as a vendor for goods and services are not. Similarly, subawards are subject to the same federal grants management requirements as the funds in the original award to the prime grantee, and the prime grantee is responsible for the subrecipient’s expenditure of the funds to the same extent as it is responsible for the funds it expends under the grant. Funds that a recipient awards to subrecipients are subject to the recipient’s A-133 audit to the extent that the auditor will examine how well the recipient monitors the subrecipient to ensure that it follows all federal expenditure requirements under the original grant. (Subawardees that expend more than $500,000 in the audit year also may be subject to their own A-133 audit.) However, funds expended by the recipient as subcontracts are examined in the recipient’s audit only to determine if they were allowable expenditures and awarded properly.

Focus Is on the SEFA

In A-133 audits, the problem is primarily associated with the Schedule of Expenditures of Federal Awards, which the grantee must prepare and the auditor uses to identify which funds to audit. Subawards listed on the SEFAs of colleges and universities are generally subject to the grant administration requirements of Circular A-110 and cost principles of Circular A-21, and those requirements pass down to the subrecipient as well.

On the other hand, contracts under grants are subject only to the rules for procurement under grants (Sections 40-48 of Circular A-110; 2 CFR 215.40-48), and once the funds are paid to the vendor, they are considered to be earned income and generally not subject to further audit. Thus, proper determination of awards of grant funds as subawards or contracts has a significant impact on the scope of the A-133 audit.

The auditor is required to render an opinion on the SEFA and, accordingly, will examine which awards are included on the SEFA and why each is there. If in the
course of conducting the audit the auditor identifies other subawards of assistance funds that are not reported on the SEFA, the auditor will qualify its opinion on the SEFA. The grantee would then be required to issue a restatement, adding the missing awards to the SEFA.

Lloyd points out that nothing in the regulations or circulars prevents a recipient from establishing a robust contract administration policy affecting vendors. For example, in a cost-reimbursable contract, a grantee might retain the right to review the contractor’s records to ensure compliance with the terms and conditions of the contract and performance. In other words, even though grant auditing requirements do not require auditing of contracts under grants, they can be auditable if the grantee so chooses.

**Transparency Reporting May Differ**

With implementation of both ARRA and FFATA reporting, the focus on the correct identification of subrecipient and vendors has intensified. Although ARRA requires recipients of ARRA funds to report expenditures of payments to subrecipients and vendors (contracts over $25,000), FFATA reporting specifically excludes reporting on payments to vendors. So the distinction between subawards and contracts has a significant impact on how the recipient satisfies these reporting requirements.

This reporting also has an impact on the single audit, because auditors are required to examine the ARRA reports as part of the A-133 audit. Recipients also must answer to the federal agencies that awarded the funds in the first place. The inspectors general at those agencies, as instructed by the Office of Management and Budget, have taken a particular interest in the reporting under ARRA, with numerous examinations focused on this. FFATA subrecipient reporting also is likely to engender heightened scrutiny at the IG level. So grantees may have to justify to independent auditors and IGs their determinations of which transactions were subawards and which were contracts for goods and/or services.

**The Determination Is a ‘Process’**

Both ARRA and FFATA regulations refer to §210 of Circular A-133 for the definition of a subaward, but Lloyd maintains that §210 captures only some of the general characteristics of a subaward, and that to truly understand the difference, one should go back to the underlying parameters in OMB’s administrative circulars (A-102 and A-110) on which portions of the A-133 definition are based.

“This is important,” he says, “because the determination should be made at the time the award is made — not at the point where its expenditures become subject to audit coverage.”

Subawards and contracts under grants have the same “life events” in common, says Lloyd, which is why making the subaward vs. contract determination can be so difficult. To make the determination, the grantee should look at all the relevant features of the award, which are actually more extensive than those identified in Circular A-133 (see Figure 3720.3-1, page 3720:22).
At each stage of the process, the grantee should ask the question, “Is this more like a contract to a vendor or more like a subaward?” The response may differ for each stage, but the ultimate decision must consider all of the features taken together.

Based on a review of the applicable regulations and circulars, Lloyd suggests there are about 15 relevant considerations in making the decision about whether an award is a subaward to an entity to further the purposes of the original grant or a contract with a vendor for goods and/or services.

Some of the characteristics presented below are so similar for both subawards and contracts that they do not weigh in on either side of the equation. For instance, both subawards and contracts can be awarded on either a cost-reimbursement basis or as a fixed obligation, and just because one approach is taken (say cost-reimbursement) does not automatically determine one type of instrument or the other.

Many of these “features” flesh out the concepts discussed in § 210 of A-133. No single feature or any special combination of features is determinative. Consequently, the determination should be made through the preponderance of features indicative of a subaward or contract.

**Stated Intent of the Awarding Agency.** Does the first paragraph of the award document say something like, “This is an award of federal financial assistance” or “This is a purchase of goods and/or services”?

**CFDA Number.** Does the agreement cite the source of the funding by CFDA number? There is no need to do this for a contract, but it is required information for a subaward.

**Competition and Solicitation.** Is there competition involved? Competition to the maximum extent practical is required for awarding contracts, but there is no governmentwide requirement for competition for subawards (although in practice competition is often involved).

**Number of Awards.** It is unlikely that there will be multiple contracts for the same goods and/or services, but it is quite common for a grantee to make several subawards to fund similar goals and activities.

**Criteria for Selection.** Contracts are most often awarded based on factors such as price and capability, whereas subawards are based on the need to further the goals of the main grant, often considering the most egregious problems that must be dealt with or the financial needs of the subawardee.

**Creation of the Statement of Work.** Who created the statement of work or scope of services? For contracts, these are always created by the awarding entity, and prospective contractors are precluded from involvement. It is quite common, however, for a subawardee to propose to the grantee what the work will be and how it will proceed.

**Timing of Payment.** Federal regulations require that grant recipients advance funds to their subrecipients when they receive advance payment themselves. This is why cash management of federal funds advanced is a type of compliance requirement that must be tested under A-133. On the other hand, normally
contracts with vendors do not involve advancing funds because to do so sacrifices a degree of leverage over contractor performance.

“Costing” of the Agreement. This is on the list because it is often (erroneously) thought to be dispositive — that all subawards are settled on a cost-reimbursement basis, whereas contracts can be fixed-price or cost-type. In fact, both types of instruments could be handled as cost-type or fixed-obligation.

Performance Criteria. Does the instrument contain performance criteria? These are common for subawards, whereas contracts tend to identify specific deliverables.

Special Conditions. Federal regulations affecting subawards permit special conditions in the award document for high-risk entities. However, contracts do not, either because high-risk organizations are generally precluded from being engaged to perform work or they simply fail to meet minimum qualifications.

Cost Participation. Subawardees are often required to commit some of their own resources to match or cost share on a project, whereas it is unusual for contractors to do so.

Risk to Awardee. Contractors nearly always assume a certain amount of risk — if the contractor does not perform adequately, there will be no payment, and the possibility of other adverse consequences exists. Subawardees, on the other hand, do not run the same risk, and awarded funds are claimed even when the quantity or quality of work falls short of expectations.

Property Purchased with Award Funds. Title to property purchased with subaward funds generally rests with the subawardee, with some residual financial interest for the pass-through entity. This means that after the subaward is finished, the pass-through entity could require return of the property or request appropriate settlement if the subawardee wants to keep it. Contractors, on the other hand, own the property they purchase and build the cost of any contemporaneous purchase into their contract pricing.

Applicable Federal Rules & Public Policy Provisions. A key distinction exists here. The applicable terms of the OMB administrative and cost circulars (A-110 and A-21) flow down to subawardees — but not to contractors. Instead, the grantee must flow down Section 48 (Contract Provisions) and Appendix A of A-110 to the contractor. Similarly, federal public policy provisions that apply to grantees because they receive federal funds flow down to subawardees — but not to contractors. These provisions are identified in the standard statement of assurances used in federal grant applications and awards (Standard Form 424B). Contractors, however, only must follow the eight contract provisions in Appendix A of A-110 that cover topics such as anti-kickback and equal employment opportunity.

Termination. Federal regulations permit grantees to terminate their contracts for cause or convenience, but they allow grantees to terminate subawards only for default.

Contact Lloyd at consultlloyd@aol.com.
**Figure 3720.3-1: Subrecipient/Vendor Distinction: Guidance From Circular A-133**

The Circular A-133 provision on subrecipient/vendor determinations serves as the definition of subaward for both ARRA and FFATA.

§ __.210 Subrecipient and vendor determinations. 

(a) General. An auditee may be a recipient, a subrecipient, and a vendor. Federal awards expended as a recipient or a subrecipient would be subject to audit under this part. The payments received for goods or services provided as a vendor would not be considered Federal awards. The guidance in paragraphs (b) and (c) of this section should be considered in determining whether payments constitute a Federal award or a payment for goods and services.

(b) Federal award. Characteristics indicative of a Federal award received by a subrecipient are when the organization:
- Determines who is eligible to receive what Federal financial assistance;
- Has its performance measured against whether the objectives of the Federal program are met;
- Has responsibility for programmatic decision making;
- Has responsibility for adherence to applicable Federal program compliance requirements; and
- Uses the Federal funds to carry out a program of the organization as compared to providing goods or services for a program of the pass-through entity.

(c) Payment for goods and services. Characteristics indicative of a payment for goods and services received by a vendor are when the organization:
- Provides the goods and services within normal business operations;
- Provides similar goods or services to many different purchasers;
- Operates in a competitive environment;
- Provides goods or services that are ancillary to the operation of the Federal program;
- Is not subject to compliance requirements of the Federal program.

(d) Use of judgment in making determination. There may be unusual circumstances or exceptions to the listed characteristics. In making the determination of whether a subrecipient or vendor relationship exists, the substance of the relationship is more important than the form of the agreement. It is not expected that all of the characteristics will be present and judgment should be used in determining whether an entity is a subrecipient or vendor.

(e) For-profit subrecipient. Since this part does not apply to for-profit subrecipients, the pass-through entity is responsible for establishing requirements, as necessary, to ensure compliance by for-profit subrecipients. The contract with the for-profit subrecipient should describe applicable compliance requirements and the for-profit subrecipient’s compliance responsibility. Methods to ensure compliance for Federal awards made to for-profit subrecipients may include pre-award audits, monitoring during the contract, and post-award audits.

(f) Compliance responsibility for vendors. In most cases, the auditee’s compliance responsibility for vendors is only to ensure that the procurement, receipt, and payment for goods and services comply with laws, regulations, and the provisions of contracts or grant agreements. Program compliance requirements normally do not pass through to vendors. However, the auditee is responsible for ensuring compliance for vendor transactions which are structured such that the vendor is responsible for program compliance or the vendor’s records must be reviewed to determine program compliance. Also, when these vendor transactions relate to a major program, the scope of the audit shall include determining whether these transactions are in compliance with laws, regulations, and the provisions of contracts or grant agreements.
13720.4 To Ensure Compliance, Treat Subawardees as Feds Treat You

AIS editors

In the recent spate of audits by the National Science Foundation’s Inspector General and in other audits by different agencies, the issue of deficient subawardee monitoring arises time and again. So just how big is the oversight job of a university, and how can you ensure compliance?

The extent and nature of the responsibilities that colleges and universities have with respect to providing funds to another entity depends on whether a subaward creates a “subcontract” or “subrecipient” relationship. If a subaward is issued to perform part of the programmatic work under a prime grant, both OMB Circulars A-110 and A-133 impose oversight responsibilities that tend to place the college or university in the same position as if it were a federal agency dealing with its own primary recipient.

In essence, under a subaward, the prime recipient becomes the funding agency with the same roles and responsibilities that the agency has to the prime grantee. It is important that colleges and universities understand that ultimate responsibility for any federal funds received rests solely with the recipient. Consequently, the federal government holds the recipient, not the subrecipient, responsible for compliance and may seek recovery from the pass-through entity, not the subrecipient, for any disallowed costs.

A-133 specifies not only subawardee monitoring requirements but also lists items that need to be included in any subaward. Specifically, §___400(d) of A-133 requires recipients to identify federal awards by informing each subrecipient of the CFDA title and number, award name and number, award year, whether the award is R&D and name of the federal agency. When some of this information is unavailable, the pass-through entity should provide the best information available to describe the award. The same section of A-133 also states that subrecipients must be advised of requirements imposed on them by federal laws, regulations and the provisions of contract or grant agreements, as well as any supplemental requirements imposed by the pass-through entity.

Subs Must Further Your Compliance

In addition to taking affirmative measures to monitor subrecipient compliance, the prime recipient institution should ensure that awards of federal funds to subrecipients contain provisions that require the subrecipient to take all of the steps necessary for the institution to comply with its own responsibilities as a pass-through entity under A-133.

This should include specific language that:

Requires the subrecipient to perform an A-133 audit or other audit, if applicable, and to submit reports or other communications promptly to the institution.

1This article is reprinted from the June 2011 issue of Federal Grants News. For more information or to order, visit www.managingfederalgrants.com.
Requires the subrecipient to take corrective action with respect to matters identified in the audit report involving noncompliance with federal laws and regulations within six months of receipt of the report. To avoid disputes as to what corrective action is necessary, the agreement should provide that the subrecipient will take corrective action “as deemed appropriate by the institution.”

Guarantees access by the institution and the institution’s independent auditor to the subrecipient’s records and financial statements as necessary for the institution to comply with its obligations as a direct recipient. Access also should be provided for federal agencies, the Comptroller General and their representatives.

Requires the subrecipient to maintain records, including audit work papers, or ensure that such records are maintained by its own auditors, for three years from the date of the audit report, subject to extension at the institution’s request, and to make the records available to federal auditors and the institution upon request.

Certifies that the subrecipient’s systems meet the standards set forth in relevant federal cost principles and administrative requirements. Circular A-110 states that the provisions of the circular apply to subrecipients performing substantive work under grants that are passed through or awarded by the primary recipient. For example, the requirements relating to cash depositories (§215.22), record keeping and retention (§215.53), and program income (§215.24), among many others, are also applicable to a subagreement.

Standard Terms, Templates for Subawards
Most organizations do not specifically spell out in their subawards all of the applicable provisions of the circulars. Instead, they incorporate the provisions of the prime award either by reference or by including the actual award. The prime award document will specify the agency regulations applicable to the award — these regulations typically include the specific agency adoption of the circular requirements. For example, the Department of Defense Grant Administration Regulations are the DoD’s implementation of A-110 and A-133 requirements. Likewise, 45 CFR Part 74, as referenced in NIH awards, is where NIH does the same.

Following the 2008 adoption by the Office of Science and Technology Policy of standard terms and conditions for research grants (in the January 25, 2008, Federal Register), federal research agencies, in turn, individually adopted the standard terms. A listing by agency of implementation of the standard terms, public policy requirements that must be followed and agency-specific terms and conditions is available at www.nsf.gov/awards/managing/rtc.jsp.

FDP Offers Universal Template
The standardization of the research terms and conditions also have allowed for universal use of the Federal Demonstration Partnership’s subaward templates. For several years, the FDP membership has been using these templates for subawards to other members. Now, the FDP, with the OSTP’s blessing, has developed universal templates that can be used by both FDP and non-FDP institutions. These templates
incorporate the research terms and conditions, including the circular requirements, as well as various public policy requirements and certain agency-specific terms and conditions (http://sites.nationalacademies.org/PGA/fdp/PGA_056020).

With the development of the FDP templates, the task of flowing down the correct terms and conditions to subawardees and incorporating them in subawards has become much easier.

Regardless of ease, however, the prime institution’s responsibilities remain the same — to assure that funding expended by subrecipients is subject to the same requirements as those for the prime awardee.
This section includes practical guidance and tools - checklists, flowcharts, forms, etc. - relating to subawards during their life-cycle. These materials are culled from a variety of authoritative sources.

Special thanks to the staff at University of Minnesota Office of Sponsored Projects Administration, in particular Judy Krzyzek and Andrea Marshall for sharing many of these resources.

**PI Quick Guide to Subawards**

University of Minnesota

The Office of Management and Budget (OMB) has combined many federal circulars into a single guidance document (known as Uniform Guidance, or 2 CFR 200) that can be used by all agencies. These new regulations became effective December 26, 2014.

A general guideline to UMN roles and responsibilities for subawards is available at: http://www.ospa.umn.edu/subaward/roles.htm.

**SELECTION AND RISK ASSESSMENT OF SUBRECIPIENTS**

**Applicable Uniform Guidance (UG) Section:**
200.331

The pass-through entity (sometimes known as “the prime award recipient”) is responsible for selecting capable subrecipients and is obligated to evaluate a subrecipient’s risk of non-compliance with federal statutes, regulations, and conditions of the subaward and must factor the outcome of that assessment into their subrecipient monitoring processes.

**Selection**

A Subrecipient should be selected based upon its technical expertise and potential ability to perform the scope of work successfully, within an infrastructure that meets certain federal internal control and policy requirements. PIs are responsible for assessing the technical adequacy of subrecipients and the appropriateness of their proposed budget. SPA validates the adequacy of the internal controls and policies of the selected subrecipient via its risk assessment process. SPA offers the Fair and Reasonable Cost Analysis Form 1 as an optional tool for PIs and departments to use to guide and document the unit portion of the selection process. If there is uncertainty about a potential subrecipient, consult with the SPA Grant Administrator serving your unit.

**Risk Assessment**

To initiate this assessment, PIs or departmental staff should ask subrecipients to complete a Subrecipient Commitment Form when they invite the subrecipient to send UMN a proposal. The completed form should be submitted to SPA; it is optional at time of proposal but is required prior to issuance of the subaward.

**CONTRACTOR VS. SUBRECIPIENT DETERMINATION**

**Applicable UG Sections:**
200.23
200.92
200.93
200.331

The pass-through entity holds the responsibility for deciding whether any given arrangement constitutes a subaward (carrying out an intellectually significant portion of the Federal award, creating a financial assistance arrangement) or a contractor agreement (obtaining goods and services, creating a procurement relationship).

As a reference tool, the FDP Checklist to Determine Subrecipient or Contractor Classification provides guidance about making this determination. If a PI is unable to determine whether a transaction is a subaward or a contractor agreement, contact your departmental administrator or SPA Grant Administrator for assistance. Note that it is critical for this determination to be correct at the time of proposal in order to ensure accurate pricing and efficient subaward issuance at time of award.
### CONFLICT OF INTEREST

**Applicable UG Section:**

200.112

A process must be in place for screening and managing potential conflicts of interest arising between the PI/UMN and their subrecipients.

When a PI completes the Proposal Routing Form and answers “no” to Question #15.b., they are certifying there is no conflict of interest with the subrecipient. If they answer “yes” because there is a conflict, Minnesota state law prohibits the University from entering into that transaction; contact SPA to determine acceptable alternatives.

### F&A ON SUBAWARDS

**Applicable UG Sections:**

200.331  
200.414

The subrecipient’s negotiated F&A rate or an alternative rate must be used for all subawards.

Apply these rules related to F&A on subawards to all competitive proposals and all new/renewal awards issued on or after 12/26/14:

1. If a federal program or a non-profit sponsor has a published statutory F&A cap, or a reduced rate that has been approved by the agency head and listed in an RFA, that reduced rate must be used both by UMN and all of its subrecipients.

2. In all other cases, apply the following rules in order of precedence:
   - The subrecipient’s federally negotiated F&A rate. This applies both to subawards the University of Minnesota receives from other entities (our applicable negotiated F&A rate must be used), and to subawards we issue (we may not reduce F&A for our subrecipients who have their own negotiated F&A rate).
   - If the subrecipient does not have a negotiated F&A rate, a 10% MTDC de minimus F&A rate must be used. Unless otherwise dictated by the federal sponsor, this rate is available to both domestic and foreign subrecipients. PIs may not negotiate or agree to lower rates with their subrecipients. (NIH caps foreign subrecipients at 8% MTDC.)
   - SPA will, as an alternative to the 10% MTDC de minimus rate, negotiate an F&A rate with a subrecipient that is ineligible to negotiate with the federal government but has more than $750K of sponsored award business with the University per year. Contact SPA if you believe this may apply to your situation.

For **ongoing** subawards that receive a new obligation of funds subject to the Uniform Guidance, the F&A rate will remain at the rate(s) used in the original subaward throughout the rest of the current project period (unless a federal agency has specified differently). New subawards (not yet signed at the time its parent award becomes subject to the Uniform Guidance) will be required to conform to Uniform Guidance F&A requirements listed above (unless the federal agency designates otherwise). PIs may either rebudget from their direct costs to meet any F&A shortfalls or may request supplements from the federal agencies, at their discretion. University personnel may not require or suggest to subrecipients that they forego F&A to which they are otherwise entitled.

There is no change to UMN’s recovery of its own F&A – this remains limited to receiving our F&A on the first $25K of each subaward we issue.

### RETAINING “PROFIT” ON FIXED PRICE SUBAWARDS

**Applicable UG Sections:**

200.201  
200.400  
FAQ .201-1

Excess revenue over expense on a fixed price subaward will not be considered profit as long as the price for the original fixed price subaward was properly established.

A properly established fixed price (sub)award in this context means that the cost of the subaward was determined in accordance with the cost principles in the Uniform Guidance and/or using past experience with similar types of work for which outcomes and their costs can be reliably predicted.

Principal Investigators and their departments are responsible for reviewing subaward budgets to ensure the proposed costs are in alignment with the programmatic objectives and are allowable and reasonable costs to their awards. Consult your SPA Grant Administrator if there are questions.
### FIXED PRICE SUBAWARDS

**Applicable UG Sections:**
- 200.45
- 200.201
- 200.332

**Unless waived by the federal agency, prior agency approval is required to enter into fixed price subawards, which may not exceed $150K. A certificate of completion or price adjustment will now also be required.**

(To date, NIH and NSF have waived the prior-approval requirement for fixed-price subawards. Note, however, NSF still requires prior approval to enter into any subaward not listed in the proposal.)

This will impact approximately 20% of all subawards issued by UMN, which are most commonly used for clinical trial site agreements, foreign subrecipients, small businesses, and small community organizations. To expedite agency approval, PIs/departments should add a justification statement to proposals contemplating a fixed price subaward. If no such statement was used at time of proposal, the PI must initiate a request for agency approval and have it countersigned by SPA, who will submit it to the agency. Allow 30 days for the agency to respond.

At the end of a fixed price subaward (during the closeout process), a new requirement has been imposed to certify completion of the fixed price subaward, documenting that the full effort or activity occurred. If the work was only partially completed, there is an obligation to adjust the price to fairly reflect the amount of work that was completed. Procedural details on the mechanics of this certification will be released in the future.

### SUBRECIPIENT PROGRESS REPORT TRACKING

**Applicable UG Sections:**
- 200.328
- 200.331

**Pass-through entities must specify any required financial or programmatic reports needed in their subawards and they are responsible for reviewing and retaining such reports.**

**Financial Reports/Invoices**

Specifying and tracking financial reports (invoices) from subrecipients is not a new requirement under Uniform Guidance and the University already has systems in place to meet this requirement that will continue to be followed.

**Programmatic Reports**

PIs will be asked by SPA before a subaward is issued if they want to require programmatic reports from their subrecipient. If a PI requires subrecipient programmatic reports, the PI must (1) collect, document their review*, and locally retain (in the PI’s or departmental records) those reports as part of the regular record retention schedule set forth for sponsored project files; and (2) PIs will document they have received and reviewed all required reports when approving subaward invoices for payment. To document mid-project monitoring a statement will be added by SPA to each invoice before it is sent to the PI for approval.

*e.g., an email back to the subrecipient indicating the report has been reviewed and is acceptable, or annotating on the report itself “Reviewed, Approved” with PI’s signature and date.

### SUBRECIPIENT MONITORING

**Applicable UG Section:**
- 200.331

**There is an increased emphasis on effective monitoring of subrecipients both prior to issuance and during the life of a subaward.**

SPA is obligated under federal regulations to verify that a subrecipient has adequate internal controls to comply with agency requirements and regulations prior to entering into a subaward and during its lifetime. This includes reviewing a subrecipient’s audit information or alternative verification of the subrecipient’s internal control structures, and review of subrecipient programmatic and financial progress (including invoices and progress reports.) In most cases, SPA is able to undertake initial or annual risk assessments without involving the PI, but PIs will be informed if their assistance is needed.

PIs play a major monitoring role by verifying progress and in ensuring invoices submitted by subrecipients are appropriate. In some cases, SPA will modify the terms of a subaward to manage institutional risk (e.g., require more frequent or detailed invoicing or reporting, use of a fixed price subaward, smaller but more frequent obligations of funding, etc.) or to meet specialized needs of a subrecipient (e.g., to help them manage cash flow). PIs should inform their SPA Grant Administrator of any special needs, concerns, or requirements arising with their subrecipients, either before a subaward is issued or as the subaward unfolds.
### PROMPT SUBAWARD PAYMENTS

**Applicable UG Sections:**
- 200.207
- 200.305
- 200.338

<table>
<thead>
<tr>
<th><strong>When issuing payments on cost-reimbursement subawards, pass-through entities are expected to issue payment on allowable costs within 30 calendar days after receipt of the billing.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>With this new prompt subaward invoice payment expectation, coupled with the new emphasis on the timely closeout of awards, PIs are asked to review and approve invoices within 14 days of their receipt, and return the approved invoice to SPA for payment. For your reference, see the checklist that should be followed when reviewing invoices.</td>
</tr>
<tr>
<td>SPA is phasing in a new streamlined invoice submission process. Subrecipients will no longer submit the invoice to the PI and Grant Administrator. Instead, subrecipients will be instructed to submit invoices to: <a href="mailto:sub-inv@umn.edu">sub-inv@umn.edu</a>. SPA will send the invoice to the PI and department and monitor to ensure that it is approved by the PI and returned to SPA so that it may be paid within the 30 day window.</td>
</tr>
<tr>
<td>If a PI believes payment should be withheld from a subrecipient, they should contact their SPA Grant Administrator immediately. Under certain limited conditions detailed in the regulations, payment may be temporarily withheld while remedial activities are requested.</td>
</tr>
</tbody>
</table>

### CLOSEOUT

**Applicable UG Section:**
- 200.343

<table>
<thead>
<tr>
<th><strong>For most federal sponsors, UMN is required to submit its final reports (financial and progress) within 90 days after project termination. Subaward invoices and final reports must be submitted within 60 days to allow the University to meet this deadline.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>If the sponsored award has a subaward, the University must receive and process all final subrecipient reports and the final invoice within 60 days. This allows Sponsored Financial Reporting (SFR) to capture the expense on the final financial report and final bill (or electronic funds draw down) with the prime sponsor. PIs must be diligent in monitoring the receipt and approval of subrecipient final invoices for processing within this 60 day deadline.</td>
</tr>
<tr>
<td>Concurrently, SPA will be requesting and monitoring the required closeout forms, including the Subaward Release Form, from the subrecipient.</td>
</tr>
</tbody>
</table>
13730.2  **Subrecipient’s Practical Guide to Proposing, Receiving, and Managing a Subaward**  
University of Minnesota

1. **What is a subaward?**

A subaward is a written agreement with another organization (subrecipient) performing a portion of a University of Minnesota sponsored project. The terms of the relationship (subaward) are driven by the requirements of the award that the University of Minnesota has received, plus any requirements that the University of Minnesota has added to ensure that it can adequately monitor the work and associated costs being performed. The UMN Grant Administrator in the Sponsored Projects Office (SPA) attempts to move every subaward forward as soon as possible but this not solely their responsibility. The UMN Principal Investigator and their University department play an important role in establishing these complex transactions. To ensure your subaward is handled as expeditiously as possible, we ask that you follow this workflow and make sure the UMN Principal Investigator and UMN SPA Grant Administrator have the information they need to initiate your subaward.

2. **What forms must I complete, when are they due and to whom? (See workflow)**

A. Proposal Stage (all of these forms are to be sent to UMN Principal Investigator)

1. Commitment Form or alternative endorsement of the proposal by the subrecipient’s Authorized Organizational Representative.
2. Statement of Work (SOW)
3. Budget & Budget Justification
4. Financial Conflict of Interest Disclosure (if the award is funded by a Public Health Service agency or other agency using their requirements – see list here)

B. Award Stage

1. An updated version of the Commitment Form if more than 12 months from date of authorized signature (this form should be sent to UMN SPA Grant Administrator)
2. Updated SOW and or budget information if revisions are necessary (these forms should be sent to UMN Principal Investigator)
3. Federal Audit Clearinghouse documents including an Audit Certification and Financial Questionnaire Form (This form should be sent to UMN SPA Grant Administrator)
4. Upon receipt of the draft subaward from the UMN SPA Grant Administrator, review and sign subaward document and return to the UMN SPA Grant Administrator. If you have questions or concerns about the terms of the subaward, contact the UMN SPA Grant Administrator before signing. Once both parties have signed the subaward, you may start work.
3. How do Indirect Costs or Facilities and Administration (F&A) impact my subaward?

Facilities and Administrative Costs are costs incurred during the normal business activities of an organization that cannot be readily identified with or directly charged to a specific project or activity. F&A costs are real, auditable costs incurred by the subrecipient each time it accepts a subaward. If a federal agency or its program has a published statutory F&A cap, that rate must be used. This is also true if the sponsor is a non-profit organization with a published policy on the payment of F&A costs. If this is the case, the UMN Principal Investigator or their departmental personnel will have told you, or it will be listed in the Funding Opportunity Announcement or proposal guidelines issued by the funding agency. If there is no published F&A cap, and if a subrecipient has a federally negotiated F&A rate, that rate must be used. If the entity does not have a negotiated F&A rate, a 10% modified total direct cost [see FAQs] de minimus F&A rate must be used instead. In certain rare circumstances the UMN PI may request an F&A rate be negotiated with the subrecipient. The subrecipient may also volunteer to accept the subaward with no F&A costs included in the budget, but UMN cannot ask or recommend the subrecipient to do so. Subrecipients are entitled to F&A at the applicable rate shown above and UMN is committed to ensuring that subrecipients receive the F&A to which they are entitled.

4. When does the monitoring of subrecipient begin?

The process of monitoring a subrecipient begins at the proposal stage. The PI obtains the proposal from the prospective subrecipient for participation in the project, and includes the proposal statement of work and budget in the prime proposal to the awarding agency. The PI also obtains the Subrecipient Commitment Form from the subrecipient. The PI’s review of the proposed subrecipient’s proposal and determination that the proposed work and budget is acceptable and desirable for inclusion in UMN’s proposal constitutes the first steps in subrecipient monitoring.

5. Why is a Subrecipient Commitment Form needed before an award is issued?

This form documents the subrecipient’s compliance with regulations and is a tool to expedite the issuance of the subaward. Having material submitted at proposal stage will allow subawards to be processed and issued more quickly however this form may also be submitted at the award stage if it wasn’t included with the proposal.

6. How is the Subrecipient Commitment Form used by UMN? Does it get submitted to the Funding Agency too?

The Subrecipient Commitment Form is to be completed and signed by an authorized institutional representative of the Subrecipient and provided at proposal stage with other proposal documents. The form also is used for awards that did not include the form at proposal stage. The UMN SPA Grants Administrator reviews the form to verify that the subrecipient can and will adhere to certain compliance obligations, such as the appropriate use of human and animal subjects, the eligibility of the subrecipient to receive sponsor funds, and the entity’s audit status. The form is
used by UMN and does not typically get submitted to the Funding Agency.

7. Why is Assessing and Managing Risk Important?
UMN SPA is responsible under federal regulations and University requirements to evaluate each proposed Subrecipient’s risk of noncompliance with Federal statutes, regulations, and the terms and conditions of the subaward. This risk assessment is performed prior to the subaward first being issued and is refreshed at least annually. Some of the attributes that will place a potential subrecipient into a higher risk category include:

◆ A qualified audit report or failure to have a current audit report
◆ An incomplete or inadequate response to the audit questionnaire (used when the subrecipient is not subject to a federal audit)
◆ A known history of non-compliance (programmatic, compliance controls, or financially)
◆ History of non-performance or failure to use funds for authorized purposes
◆ A new subrecipient or the subrecipient is new to the type of work being performed
◆ A large percentage of project funds is being passed-through to the subrecipient
◆ The subrecipient’s sponsored research portfolio is small and the subaward amount is large.
◆ The subrecipient has new or substantially changed systems (including its financial system)

UMN is also required to ascertain whether there is a potential conflict of interest between the UMN Principal Investigator and the entity or its principals. UMN also reviews to make sure a Subrecipient is not debarred or suspended from doing work with the federal government. UMN will not issue a subaward to an entity that is debarred or suspended or in the event of an unmanaged conflict of interest.

8. What is Subrecipient monitoring and why is it required?
It is primarily the UMN Principal Investigator’s responsibility to monitor the progress of the subrecipient. Subrecipients are partners in the research enterprise so it is important to identify and establish good communication with subrecipient’s representatives from the beginning. UMN Principal Investigators consider the following factors in monitoring the progress of their sub recipients:

◆ Is the work progressing according to schedule and consistent with the Scope of Work?
◆ Are deliverables/reports being provided in a timely manner?
◆ Are compliance requirements (e.g., human- and animal-subjects approvals, conflict of interest approvals, if required) up to date?
◆ Do invoices reflect allowable, allocable, and reasonable costs?
Are funds being spent according to the budget and project time lines?
◆ Is committed cost sharing verified?
◆ Has the Subrecipient done an adequate job of timely requesting any needed prior approvals?
◆ If there are unanticipated delays, has the UMN Principal Investigator been notified in a timely manner of the problems that have arisen, and has a corrective action plan already been worked out?

9. How do I get paid?
The subrecipient sends invoices to sub-inv@umn.edu on the schedule listed in the subaward. After review and approval by the UMN Principal Investigator and UMN SPA Grant Administrator, the invoice will be paid. Invoices are paid within 30 days after receipt by the University. (Sample invoice). If any programmatic reports were due during the period covered by the invoice, these reports must be submitted and approved by the UMN Principal Investigator before payment will be made.

A subrecipient can request their payments be direct deposited by completing UM Vendor ACH Authorization Agreement and returning the completed for to UM Disbursement Services (disbsvcs@umn.edu).

10. What is required if the subrecipient does not have enough working capital and needs an advance payment from the University?
The University may, in rare circumstance, provide a subrecipient with a working capital advance if the subrecipient does not have sufficient working capital to initiate the scope of work described in the subaward. A letter from the Subrecipient’s authorized official to SPA should be submitted, including the following information:

1. A sound rationale for why a working capital advance is needed and verifying that the proposed subrecipient does not have access to sufficient capital to perform the work and be reimbursed

2. The amount of the proposed advance payment. Note: the amount should be only enough to cover the projected short term working capital needs of the subrecipient organization. In this case, “short term” refers to a period of not more than 2 months, and should not exceed a 2 month pro-rata share of the first year budget unless there are unusual up front expenses (e.g., equipment, recruitment costs, etc.) If there are unusual up front expenses, explain what those costs are and how much additional money is needed.

3. An explanation of whether ongoing advance payments are needed or if this is a one-time request. If on-going advance payment is needed, the Subrecipient should typically plan to provide monthly documentation of actual expenses and projections of new cash needs. For example:

   Initial Request for Months 1 and 2 - $25,000 x 2 months = $50,000

   After first month of performance -
   Actual Expenses for Month 1 = $22,000
Cash on Hand: $28,000 ($50,000 advance - $22,000 actual expenses for Month 1)
Projected Expenses for Month 3 = $25,000
Working Capital Cash Request from UMN = $22,000 (Cash On Hand + Projected Expense for Month 3 - Estimated Cost for 2 months)

4. An endorsement by the authorized representative of the subrecipient.

Please Note: Advance payments to subrecipients will only be considered if the subaward is fully executed.

11. How can a subaward be changed / amended? When does the subaward need to be changed and when can a Subrecipient simply get UMN’s approval without changing the subaward?

The UMN Principal Investigator or UMN SPA determines when a subaward is to be amended. Common reasons for amending a subaward include providing additional funding, extending the period of performance or modifying the reporting schedule. It is important to note that some changes, such as scope of work changes, or a change in the Subrecipient’s Principal Investigator may require the prior approval of the prime sponsor (i.e. awarding agency). If a change requiring funding agency approval is required, the Subrecipient must write to the UMN PI (signed by both the Subrecipient PI and the Subrecipient’s institutional representative) and request the necessary prior approval. In general, Subrecipient’s should plan to submit their requested changed 45 days in advance of when it is needed, as time is needed both for UMN to review the request and, if acceptable, to obtain agency approval. Federal agencies normally respond within 30 days from the time UMN has submitted the request. Subrecipients may not write directly to funding agencies, but must instead submit all of their prior approval requests through UMN.

12. How is a subaward closed out?

The UMN Principal Investigator is responsible for submitting any required technical, property, and invention reports and / or any other required deliverables required by the awarding agency. Failure by the Subrecipient’s Principal Investigator to provide their reports and deliverables according to stated timelines can have a negative impact on submission of UMN reports to the awarding agency and may impact future funding from the sponsor. Prior to UMN making final payment to the subrecipient the Subaward Release Form must be received by the UMN Grant Administrator.
Figure 3730.2-1. Subaward Workflow for Subrecipients

What is a subaward?

What is subaward monitoring and why is it required?

When does the monitoring of a subrecipient begin?

What forms must I complete in the proposal stage, when are they due and to whom?

Why is a subrecipient commitment form needed before an award is issued?

How is the subrecipient commitment form used by UMN? Does it get submitted to the Funding Agency too?

How does Indirect Costs or Facilities and Administration (F & A) impact my subaward?

What forms must I complete in the award stage, when are they due and to whom?

Why is assessing and managing risk important?

How do I get paid?

What is required if the subrecipient does not have enough working capital and needs an advance payment from the University?

How can a subaward be changed / amended?

How is a subaward closed out?
Frequently Asked Questions about Subawards
University of Minnesota

1. How do I tell if it is a Subaward or Other Procurement (CPS)?
FDP Checklist to Determine Subrecipient or Contractor Classification

2. What information is needed at time of proposal?
◆ Subrecipient statement of work
◆ Subrecipient budget and budget justification
◆ Subrecipient Commitment Form signed by subrecipient institutional official
◆ Any other documents required by U of M or Sponsor (for example: NSF Nondiscrimination Certification, http://www ospa umn edu/subaward/forms. htm)
◆ FCOI Forms Packet, if applicable
◆ If subrecipient is not set up as a vendor in EFS, a W9 form will be required

3. Do I need to provide an original signed copy of the commitment form and budget, or can I email as attachments to the GA?
Unless the sponsor requires it, we do not need an original. An email or fax is sufficient.

4. How should the selection of a subrecipient be documented?
Original documentation should be maintained in the department that was used in developing the proposal estimate. This information will be required to substantiate how proposal pricing and collaborator choice was derived. The forms below should be used as a tool when investigators are developing proposals and choosing subrecipient collaborators. The information gathered on these forms will help document information that may be requested by auditors. These forms do not need to be submitted to SPA, but should be kept in the department. The exception is that for Federal Contracts Form 2 should be submitted to SPA.

Fair & Reasonable Subaward Cost Analysis Form 1 - Subawards under Grants, Cooperative Agreements, and Nonfederal Contracts
Fair & Reasonable Subaward Cost Analysis Form 2 - Subawards under Federal Contracts

5. What F&A rate do I apply to a subaward?
There are two types of F&A costs on subawards - those earned by the subrecipient, and those earned by the U of M. If a federal program has a published statutory F&A cap (NIH caps foreign subrecipients at 8% MTDC), that rate must be used both by UMN and all of its subrecipients. For all other federal programs, if a subrecipient has a federally negotiated F&A rate, it must be used. If the entity does not have a negotiated F&A rate, a 10% de minimus F&A rate must be used instead, or the PI/
department may request that SPA negotiate an F&A rate with the subrecipient. PIs may not negotiate or agree to lower rates with their subrecipients. The U of M will apply its federally approved F&A rate or the sponsor-allowed F&A rate to any subaward issued. Specifically, this means that the U of M will charge its F&A on the first $25,000 of a subaward during a competitive segment (e.g., project period). For subawards under non-federal prime sponsors, the F&A rate and base will vary. More information is available on the Uniform Guidance FAQs. Please consult your GA if you have any questions.

6. What should be the period of performance on my subaward?
The period of performance on a subaward (including any requested extensions) may not be outside the U of M’s period of performance. Subawards may, however, be issued for shorter periods of time than the U of M’s full period of performance. Normally, if the University receives annual incremental funding from a sponsor, any subawards will also be funded on a year-by-year basis.

7. How can I tell if the subrecipient’s invoice has been paid?
See our Job Aid Finding Vouchers and Pay Dates

8. How do I modify a subaward?
Send the SPA GA the necessary information for the change needed (workscope, budget, performance period, deliverables, additional terms, etc.). Modifications may require prior sponsor approval.

9. What is FFATA and how does it affect me?
The Federal Funding Accountability and Transparency Act passed 9/2006. It requires a searchable website for public funding by data elements by 1/1/2008 for awards and by 1/1/2009 for subawards. SPA will be collecting and sending in this information to the Federal Government. SPA won’t sign subaward or any amendments until the FFATA form is returned by the subrecipient. Any questions/issues regarding FFATA should be forwarded to SPA. FFATA data collection is conducted by UMN Purchasing Department on Federal contracts if the acquisition cost is greater than $25k.

10. What is Risk Analysis?
Uniform Guidance, Section 200.331 requires a risk analysis to evaluate the likelihood that a subrecipient will fail to comply with the requirements of the subaward. This will be done by SPA during the issuance process and monitored during the life of the subaward. The criteria used in evaluating risk can include the subrecipient’s audit experience, the prior oversight and monitoring the subrecipient has received, the size, nature, and complexity of the proposed research project, and the fiscal maturity of the subrecipient.
13730.4  **FDP Subrecipient or Contractor Classification Checklist**

Federal Demonstration Partnership

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**Checklist to Determine Subrecipient or Contractor Classification**

**OBJECTIVE:** Generally, the determination of the relationship with an entity is verified through the institutional review of the proposal narrative, budget justification, and other related proposal documents, as well as through discussions with key personnel prior to proposal submission. When the relationship remains unclear, this form may provide assistance in making an accurate determination.

**DEFINITIONS FROM UNIFORM GUIDANCE (2 CFR. PART 200):**

- **Subrecipient:** §200.43 Subrecipient means a non-Federal entity that receives a subaward from a pass-through entity to carry out part of a Federal program, but does not include an individual that is a beneficiary of such program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding

- **Contractor:** §200.21 Contractor means an entity that receives a contract as defined in §200.22. Contractor means a legal instrument by which a non-Federal entity purchases goods or services needed to carry out the project or program under a Federal award.

**INSTRUCTIONS:** Complete sections one and two of the checklist by marking all characteristics that apply to the outside entity. The section with the greatest number of marked characteristics indicates the likely type of relationship the entity will have with the University. On occasion there may be exceptions to the type of relationship indicated by the completed checklist. In these situations, the substance of the relationship should be given greater consideration than the form of agreement between the University and the outside entity. Section 3 should be used to provide documentation on the use of judgment in determining the proper relationship classification.

**NAME OF OUTSIDE ENTITY:**

---

**SECTION 1 - SUBRECIPIENT**

**Description:** A subaward is for the purpose of carrying out a portion of a Federal award and creates a Federal assistance relationship with the subrecipient. Characteristics which support the classification of the non-Federal entity as a subrecipient include when the non-Federal entity:

- Determines who is eligible to receive what Federal assistance;
- Has performance measured in relation to whether objectives of a Federal program were met;
- Has responsibility for programmatic decision making;
- In accordance with its agreement, uses the Federal funds to carry out a program for a public purpose specified in authorizing statute, as opposed to providing goods or services for the benefit of the pass-through entity.

Entities that include these characteristics are responsible for adherence to applicable Federal program requirements specified in the Federal award.

**SECTION 2 - CONTRACTOR**

**Description:** A contract is for the purpose of obtaining goods and services for the non-Federal entity’s own use and creates a procurement relationship with the contractor. Characteristics indicative of a procurement relationship between the non-Federal entity and a contractor are when the non-Federal entity receiving the Federal funds:

- Provides the goods and services within normal business operations;
- Provides similar goods or services to many different purchasers;
- Normally operates in a competitive environment;
- Provides goods or services that are ancillary to the operation of the Federal program.

Entities that include these characteristics are not subject to compliance requirements of the Federal program as a result of the agreement, though similar requirements may apply for other reasons.

**FINAL DETERMINATION:**

- [ ] SUBRECIPIENT
- [ ] CONTRACTOR

**OPTIONAL - SECTION 2 - USE OF JUDGMENT:** (use only when the determination cannot clearly be made using the above criteria)

**Description:** In determining whether an agreement between a pass-through entity and another non-Federal entity carries the latter as a subrecipient or a contractor, the substance of the relationship is more important than the form of the agreement. All of the characteristics listed above may not be present in all cases, and the pass-through entity must use judgment in classifying each agreement as a subaward or a procurement contract.

**Explanation of Use of Judgment Determination:**

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Prepared By: ___________________________ Date: ___________________________
13730.5  **Subaward Processing Checklist – Department/PIs**  
University of Minnesota – Office of Sponsored Projects Administration

**PROPOSAL PROCESSING**

PI requests proposal package from proposed subrecipient, to include:
- Statement of Work
- Budget and Justification
- Any other documents required by UMN or Sponsor (example: NSF Non-discrimination cert.)
- WB or W9 if subrecipient is new to UMN
- Signed Subrecipient Commitment Form

PI evaluates subrecipient
- Assess technical expertise and financial viability of subrecipient organization and key personnel
- Fair and Reasonable Cost Analysis (Form I or II)

PI prepares proposal
- Integrate the subrecipient’s statement of work and budget into UMN’s proposal
- Include other forms (budget, biosketches, other support) as required by sponsor
- Forward completed UMN proposal to SPA for review, including subrecipient proposal package

**SUBAWARD ISSUANCE:**

PI/Dept. provide information requested by SPA for subaward issuance
- Collaborator and contract information
- Statement of work
- Budget (including cost share, if applicable)
- Technical/financial reporting requirements
- Payment terms and schedule
- Subaward performance period
- Verification that subrecipient is compliant with IRB, IACUC approvals (if applicable)
- Fair and Reasonable Cost Analysis (Form I or II)
- Other information as needed

**SUBAWARD PROBLEMS?**

Subrecipient not submitting timely or accurate invoices?
Subrecipient not complying with the terms of the agreement or its budget?
Subrecipient isn’t performing?

Contact your SPA Grant Administrator early! We’ll work with you and subrecipient to resolve.

**SUBAWARD MONITORING:**

PI monitors subrecipient technical progress
- Communicate regularly with subrecipient PI to monitor progress on the project
- Monitor receipt of technical reports for timeliness and content
- Communicate with SPA if changes need to be made to statement of work, reporting requirements, budgeting
- PI/Dept. monitor subrecipient’s adherence to terms
- PI/Dept. verify compliance approvals remain current for subrecipient’s portion of statement of work (human subjects, animal subjects, biosafety)

PI/Dept. review, monitor receipt of invoices
- Are they arriving on schedule?
- Do they contain the right level of detail to allow adequate review?

PI reviews and signs invoices (see checklist for PIs)
- Ensure all costs are allowable, allocable, and reasonable
- Ensure all costs were incurred within the period of performance of the subaward
- Confirm that expenses are aligned with technical progress and all required reports are received
- Cost sharing is appropriately reflected, if required
- If acceptable, PI signs and dates invoice
- PI/Dept. send approved invoice to SPA mailbox spa-inv@umn.edu for processing or returns to subrecipient for more detail

**SUBAWARD AMENDMENT ISSUANCE:**

PI assesses need to modify statement of work, budget, period of performance
- Notify SPA in a timely manner to request amendment
- Provide information to SPA (budgets, dates, reporting requirements, etc.)
- Assist SPA in negotiating changes, if needed

**SUBAWARD CLOSE-OUT**

PI/Dept. plan for timely closeout
- Check status with subrecipient 90 days before end date
- Follows up on late or missing reports or deliverables
- Obtain final invoice (marked FINAL) from subrecipient
- Send final invoice to SPA
- Subaward Release Form
13730.6 Subaward Roles and Responsibilities

University of Minnesota – Office of Sponsored Projects Administration

Departments/PIs

◆ PI requests proposal package from proposed subrecipient and evaluates selection.
◆ PI/Dept. verify FCOI policy and/or obtain FCOI Forms 1 & 2 if sponsor uses PHS FCOI regulations
◆ PI/Dept. indicate subawards on PRF.
◆ PI prepares proposal and sends to SPA
◆ PI/Dept. provide additional information required for subaward issuance
◆ PI monitors subrecipient technical progress and performance
◆ PI/Dept. monitor subrecipient’s adherence to terms and cost sharing requirements
◆ PI/Dept. verify compliance approvals are current for subrecipient’s portion of statement of work (human subjects, animal subjects, biosafety)
◆ PI/Dept. monitor receipt of invoices and reviews that expenses are aligned with technical progress and all required reports are received
◆ PI reviews, signs, and dates invoices
◆ PI/Dept. send approved invoice to SPA mailbox spa-inv@umn.edu for processing or returns to subrecipient for more detail or documentation
◆ PI assesses need to modify statement of work or budget
◆ PI/Dept. plan for timely closeout and obtain prime no cost extension if needed (follow up on missing reports, receipt of final invoice)
◆ PI promptly alerts SPA when problems arise (inability to obtain satisfactory invoice, non-performance)

Sponsored Projects Administration

◆ SPA reviews and submits proposal
◆ SPA verifies FCOI policy and reviews Forms 1&2
◆ SPA works with COI office to verify FCOI training and disclosures
◆ SPA negotiates with sponsor and accepts prime award
◆ SPA follows-up with PI/Dept to obtain any additional required documentation/data required for subaward
◆ SPA reviews risk levels and, if necessary, modifies subaward agreements
◆ SPA prepares, negotiates, issues and distributes subaward agreement
◆ SPA collects, maintains, and reports FFATA data
◆ SPA activates/encumbers subaward funds in financial system
◆ SPA assists PIs and departments with monitoring subawards
◆ SPA requests and reviews annual audit reports
◆ SPA verifies corrective action plans are implemented (if necessary)
◆ SPA notifies department administrators if the invoices are incorrect
◆ SPA tracks and processes invoices with PI approval
◆ SPA prepares, negotiates, issues, and distributes amendments
◆ SPA modifies subaward encumbrances in the financial system
◆ SPA completes closeout
◆ SPA resolves problems that arise during performance
13730.7 Subrecipient Commitment Form
University of Minnesota – Office of Sponsored Projects Administration

Subrecipient Legal Name:__________________________________________________________

Subrecipient PI Name:___________________________________________________________

Address:________________________________________ City:________________________ State:__________________

Address where research will be performed:________________________________________

City:________________________ State:__________________

Proposal Title:_________________________________________________________________

Performance Period Begin Date:________________________ End Date:____________________

UMN PI’s Name:______________________________________________________________

Funding Agency:______________________________________________________________

SECTION A – Proposal Documents
The following documents are included in our proposal submission and covered by the certifications below (check as applicable):

☐ STATEMENT OF WORK (required)
☐ BUDGET AND BUDGET JUSTIFICATION (required)
☐ Biosketches of all Key Personnel, in agency-required format
☐ Other:_____________________________________________________________________

☐ Other:_____________________________________________________________________

SECTION B – Certifications
1. Facilities and Administrative Rates included in this proposal have been calculated based on:
   (please attach a copy of your F&A rate agreement or provide a URL link to the agreement)
   ☐ Our F&A rate for this type of work is limited to a published statutory F&A cap by a federal program.
   ☐ Our federally-negotiated F&A rate for this type of work.
   ☐ A rate lower than our federally negotiated F&A rate, as listed in our proposal.
   ☐ Our F&A rate for this type of work has been previously negotiated with UMN that we hereby agree to accept.
   ☐ 10% MTDC de minimus rate (Subrecipient has never had a federally negotiated rate)

2. Fringe Benefit Rates included in this proposal have been calculated based on:
   ☐ Rates consistent with or lower than our federally-negotiated rates
     (If this box is checked, please attach a copy of your FB rate agreement or provide a URL link to the agreement)
   ☐ Other rates (please specify the basis on which the rate has been calculated in Section D Comments below).

3. Small Business Concern ☐ Yes ☐ No
   Subrecipient represents that it is a small business concern as defined in 13 CFR 124.1002.
   
   If "Yes": Subrecipient represents that it is a:
   ☐ Small disadvantaged business as certified by the Small Business Administration
   ☐ Women-owned small business concern
   ☐ Veteran-owned small business concern
   ☐ Service-disabled veteran-owned small business concern
   ☐ HUBZone small business concern

4. Cost Sharing or Matching ☐ Yes ☐ No Amount:________________________
   Cost sharing or Matching amounts and justification should be included in the Subrecipient’s budget

5. Human Subjects ☐ Yes ☐ No Approval Date:________________________☐ Pending Approval
   If "Yes": Copies of the IRB approval must be provided to UMN. It is understood that no funds may be expended for human
   subject related activities until all appropriate human subject related approvals are in place.
   
   If "Yes": Have all key personnel involved completed Human Subjects Training? ☐ Yes ☐ No

6. Animal Subjects ☐ Yes ☐ No Approval Date:________________________☐ Pending Approval
   If "Yes": Copies of the IACUC approval must be provided to UMN. It is understood that no funds may be expended for animal
   related activities until all appropriate animal related approvals are in place.
7. Conflict of Interest (applicable to PHS & NSF funded projects or agencies that have adopted the federal financial disclosure requirements)

   Please check the appropriate responses below

   a. □ Not applicable because this project is not being funded by PHS (NIH, CDC, AHRQ, etc.), NSF, or any other sponsor that has adopted the federal financial disclosure requirements. See http://sites.nationalacademies.org/PGA/fdp/PGA_070596 for list of sponsors that adopted federal financial disclosure requirements.

   For PHS Funded Projects ONLY:

   b.1 □ Subrecipient Organization/Institution is listed on the FDP Clearinghouse (http://sites.nationalacademies.org/PGA/fdp/PGA_070596) and certifies that it has an active and enforced conflict of interest policy that is consistent with the provision of 42 CFR Part 50, Subpart F “Responsibility of Applicants for Promoting Objectivity in Research” and 45 CFR Part 94 “Responsible Prospective Contractors.” Subrecipient also certifies that, to the best of Institution’s knowledge, (1) all financial disclosures will be made related to the activities that may be funded by or though a resulting agreement, and required by its conflict of interest policy, and (2) all identified conflicts of interest have or will have been satisfactorily managed, reduced or eliminated in accordance with subrecipient’s conflict of interest policy prior to the expenditures of any funds under any resultant agreement and within a timely manner sufficient to enable timely FCOI reporting.

   b.2 □ Subrecipient will follow the Conflict of Interest Policy established and enforced by his/her institution. Subrecipient certifies that the Conflict of Interest Policy established is consistent with the provision of 42 CFR Part 50, Subpart F “Responsibility of Applicants for Promoting Objectivity in Research” and 45 CFR Part 94 “Responsible Prospective Contractors.” Please complete and sign Form 1 found here: http://www.ospa.umn.edu/subaward/documents/PHSFCOformpacket17Jul14.pdf

   b.3 □ Subrecipient does not have an active and/or enforced conflict of interest policy and agrees to adopt University of Minnesota’s policy located at http://www.compliance.umn.edu/conflictPolicies.htm - Please complete and sign Form 1 AND Form 2 found here: http://www.ospa.umn.edu/subaward/documents/PHSFCOformpacket17Jul14.pdf

   c. By signing below, Subrecipient certifies that the required training will be completed by each investigator prior to engaging in any research related to any PHS funded contract/grant. For those adopting University of Minnesota’s policy, the training is located online at http://z.umn.edu/coext

8. Debarment and Suspension

   Is the PI or any other employee or student participating in this project debarred, suspended or otherwise excluded from or ineligible for participation in federal assistance programs or activities? □ Yes □ No (If “Yes”, explain in Section D Comments below)

     The Subrecipient certifies they: (answer all questions below)

     □ are □ are not presently debarred, suspended, proposed for debarment, or declared ineligible for award of federal contracts

     □ are □ are not presently indicted for, or otherwise criminally or civilly charged by a government entity within three (3) years preceding this offer, been convicted of or had a civil judgment rendered against them for commission of fraud or criminal offense in connection with obtaining, attempting to obtain, or performing a public (federal, state or local) contract of subcontract; violation of Federal or State antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property

     □ have □ have not within three (3) years preceding this offer, had one or more contracts terminated for default by any federal agency

SECTION C - Audit Status

9. Audit Status

   □ Subrecipient receives an annual audit in accordance with Uniform Guidance 2 CFR 200.

     Most recent fiscal year completed: FY__________

   □ Subrecipient DOES NOT receive an annual audit in accordance with Uniform Guidance 2 CFR 200.

     Subrecipient is a: □ Non-profit entity (received less than $750,000 in federal assistance i.e. federal funds, grants or awards)

     □ Foreign entity

     □ For profit entity

     □ Government entity
### SECTION D - Comments (URL link to F&A Rate Agreement, etc.)

<table>
<thead>
<tr>
<th><strong>APPROVED FOR SUBRECIPIENT</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>The information, certifications and representations above have been read, signed and made by an authorized official of the Subrecipient named herein. The appropriate programmatic and administrative personnel involved in this application are aware of funding agency's policy in regard to subaward and are prepared to establish the necessary inter-institutional agreements consistent with those policies. <strong>Any work begun and/or expenses incurred prior to execution of a subaward are at the Subrecipient's own risk.</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signature of Subrecipient's Authorized Officer</th>
<th>Legal Name of Subrecipient's Organization/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name and Title of Authorized Official</td>
<td>Address</td>
</tr>
<tr>
<td>Email</td>
<td>City, State, Zip</td>
</tr>
<tr>
<td>Phone</td>
<td>Federal Employer Identification Number (EIN)</td>
</tr>
<tr>
<td>Date</td>
<td>DUNS or DUNS+4 number</td>
</tr>
<tr>
<td></td>
<td>Subrecipient’s Congressional District (i.e. MN-005)</td>
</tr>
</tbody>
</table>

**Is Subrecipient owned or controlled by a parent entity? □ Yes □ No**

If "Yes", please provide the following:

- Parent Entity Legal Name: 
- Parent Entity Address, City, State, Zip: 
- Parent Entity Congressional District: 
- Parent Entity DUNS: 
- Parent Entity EIN:
13730.8  Fair & Reasonable Cost Analysis Form
University of Minnesota – Office of Sponsored Projects Administration

When proposing a subaward for a sponsored research project to be funded under a grant (federal/nonfederal), cooperative agreement (federal/nonfederal), or nonfederal contract, the University of Minnesota requires a cost/price analysis and related matters. Please comply with these requirements by completing the following and retain in department file.

**Background/Purpose**

Subaward proposed to (name of subrecipient):

Research effort entitled:

Research sponsored by:

PRF #: University of Minnesota PI is:

University of Minnesota proposal dated: Proposed Subaward Total: $ 

Subaward Period of Performance: From: To:

Project # (if known):

**When Was Subrecipient Selected? (Check the appropriate box):**

☐ Subrecipient's proposal was included in University of Minnesota’s proposal package and was evaluated by the sponsor along with University of Minnesota as part of the overall selection process conducted pursuant to the sponsor’s award under the prime award. At that time, the technical aspects of the Subrecipient's proposal were acceptable to the sponsor, and therefore, this Subrecipient is the logical choice for this award.

☐ This Subrecipient was not included in University of Minnesota’s proposal package. This subrecipient is unique because (attach additional pages if necessary):

The reasons (other than cost) that this subrecipient was selected over others are (attach additional pages if necessary):

**Cost/Price Reasonableness**

☐ All costs proposed by Subrecipient under this Subaward were reviewed and approved by the University of Minnesota as reasonable and necessary for the proposed scope of work.

Items to be reviewed when applicable include the following:

- Salaries, type of personnel, and level of effort have been reviewed and appear reasonable for the proposed scope of work.
- Specific equipment items and/or of supplies are separately listed and are appropriately based on standard or catalog prices, or vendor quotes.
- The travel appears to be necessary, and trips are priced separately and correctly, based on both technical review and review of published air fares, hotel rates and per diem rates.
- All other significant costs are separately itemized and are reasonable.

**Department Verification**

All costs proposed by Subrecipient under this Subaward were reviewed and approved by the individual completing this form:

Signature: Date:

Printed Name / Title:
13730.9  **Financial Conflict of Interest Risk Analysis Flow Charts**

**University of Minnesota**

Subaward Financial Conflict of Interest (FCOI) Review procedure for Risk Analysis Form (New Subawards)

1. **Subaward FCOI Risk Analysis Review**
   - Mark n/a and proceed to next step on Risk Analysis
   - Does subaward meet FCOI requirements?
     - Yes
       - Is subrecipient in EFS under resources?
         - Yes
           - Is Subrecipient in FDP Clearinghouse?
             - Yes
               - Note subrecipient policy on Risk Analysis and proceed to next step
             - No
               - Request Form packet from Subrecipient and enter into EFS. Note on Risk Analysis Form.
         - No
           - Note on Risk Analysis Form and issue subaward if Risk Analysis is complete
     - No
       - Obtain current Forms 1 & 2 and/or training and enter into EFS. Note on Risk Analysis Form and proceed to next step
       - Is the disclosure date expired (1 year) or training date expired (4 years) for any of the key personnel?
         - Yes
           - Note on Risk Analysis and proceed to next step
         - No
           - Note subrecipient policy on Risk Analysis and proceed to next step

2. Copyright ©2015 April 2015 National Council of University Research Administrators. All rights reserved.
Subaward Financial Conflict of Interest (FCOI) Review procedure for Risk Analysis Form (All amendments)

1. Subaward FCOI Risk Analysis Review
   - Mark n/a and proceed to next step on Risk Analysis
2. Does subaward meet FCOI requirements?
   - Yes
     - Is the disclosure date expired (1 year) or training date expired (4 years) for any of the key personnel?
       - Yes
         - Note on Risk Analysis and proceed to next step
       - No
         - Obtain current Forms 1 & 2 and/or training and enter into EFS. Note on Risk Analysis Form and proceed to next step
3. Is the Subrecipient using University of Minnesota FCOI policy?
   - Yes
     - Obtain current Forms 1 & 2 and/or training and enter into EFS. Note on Risk Analysis Form and proceed to next step
   - No
     - Note subrecipient policy on Risk Analysis and proceed to next step
Subaward Federal Funding Accountability and Transparency Act (FFATA) Review procedure for Risk Analysis Form (new subawards)

New subaward FFATA Risk Analysis Review

When processing PRIME award, GA should identify “FFATA” or “NOT FFATA” in EFS and also put the FFATA term in “Terms and Conditions”

Is Subaward under federal funding?

Yes

Is subaward amount equal to or over $25k?

Yes

Mark “No” and proceed to next step on Risk Analysis

No

Email support staff at ovprffat@umn.edu with subaward details

Email copy of completed subaward to support staff at ovprffat@umn.edu

No

Mark “No” and proceed to next step on Risk Analysis

After half executed subaward is received, it may now be signed

Continue normal subaward process but DONOT presign subaward

GA will receive email from support staff confirming FFATA has been recorded. Use this information to complete subaward agreement Attachment 3B
Subaward Federal Funding Accountability and Transparency Act (FFATA) Review procedure for Risk Analysis Form (amended subawards)

Amended subaward FFATA Risk Analysis Review

Prepare subaward modification. DO NOT presign the subaward.

Has previous subaward been reported under FFATA?

Yes

Once the subrecipient returns with signature, obtain final signature and return to subrecipient.

Forward fully signed subaward amendment by email to FFATA delegate (ovprffat@umn.edu) along with cumulative funding.

No

Refer to "FFATA - New Subaward" instructions.

Note:
• See job aid for reporting details
• Once an award is reported in FSRS.gov, we still continue to report even if subaward total is reduced below the FFATA threshold ($25k).
### 13730.11 Risk Analysis Matrix

University of Minnesota – Office of Sponsored Projects Administration

<table>
<thead>
<tr>
<th>Subrecipient Risk Analysis and Compliance Record (10-06-2014)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subrecipient Name:</strong></td>
</tr>
<tr>
<td><strong>Prime Sponsor:</strong></td>
</tr>
<tr>
<td><strong>CON#</strong></td>
</tr>
<tr>
<td><strong>Audit Path</strong></td>
</tr>
<tr>
<td><strong>Audit Weaknesses?</strong></td>
</tr>
</tbody>
</table>

#### Analysis Matrix

**Instructions:** Mark yes or no.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Wt</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is the entity located outside the U.S.?</td>
<td>Y</td>
<td>6</td>
</tr>
<tr>
<td>Will work be done outside the U.S.?</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Is entity non-profit or government?</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Is prime award a contract or subcontract (rather than grant)?</td>
<td>Y</td>
<td>4</td>
</tr>
<tr>
<td>Is amount of Subgrant/Subcontract more than $50k?</td>
<td>Y</td>
<td>4</td>
</tr>
<tr>
<td>Is amount of subaward 50% or more of total award?</td>
<td>Y</td>
<td>5</td>
</tr>
<tr>
<td>Are accounting systems established?</td>
<td>Y</td>
<td>10</td>
</tr>
<tr>
<td>Do audit results indicate weaknesses in the entity’s procurement system?</td>
<td>Y</td>
<td>3</td>
</tr>
<tr>
<td>Does entity have a negotiated indirect cost rate agreement?</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Is entity subject to A-133?</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Any prior negative experience with entity?</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Is there ITAR/EAR type of work?</td>
<td>Y</td>
<td>10</td>
</tr>
<tr>
<td>Is the entity using humans, animals, DNA, stem cells, etc. (compliance)?</td>
<td>Y</td>
<td>2</td>
</tr>
<tr>
<td>Is entity mature?</td>
<td>Y</td>
<td>6</td>
</tr>
<tr>
<td>Is prime sponsor government owned &amp; contractor operated?</td>
<td>Y</td>
<td>10</td>
</tr>
<tr>
<td>Is there potential for COI regarding relationship of subrecipient and PI?</td>
<td>Y</td>
<td>10</td>
</tr>
<tr>
<td>Are deliverables tangible products or pivotal to success?</td>
<td>Y</td>
<td>7</td>
</tr>
<tr>
<td>Is “Advantaged” status claimed?</td>
<td>Y</td>
<td>1</td>
</tr>
<tr>
<td>Special Considerations? (provide details in notes)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Total Risk Score (≥ 15 is high and should be escalated) | 0 |

| Escalated to PGA? | Y | N |

**Completed by:**

**Date:**

### Amendment #______

<table>
<thead>
<tr>
<th>Audit Path</th>
<th>A-133</th>
<th>Financial Questionaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Audit Weaknesses?</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Debarment:</strong></td>
<td>No</td>
<td>Yes</td>
</tr>
</tbody>
</table>

**Initials:**

**Date:**

<table>
<thead>
<tr>
<th>F&amp;A Rate:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FFATA Required:</td>
<td>No</td>
</tr>
</tbody>
</table>

**Initials:**

**Date:**

| FC01: | Sub policy | UofM policy | n/a |

**Initials:**

**Date:**

**Attatch page for multiple amendments**

**Notes:**

### AUDIT VALID THROUGH:

<table>
<thead>
<tr>
<th>Closeout - Subaward</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Release Form:</strong></td>
</tr>
<tr>
<td><strong>Received:</strong></td>
</tr>
<tr>
<td><strong>Date:</strong></td>
</tr>
</tbody>
</table>

**Completion Process:**

**By:**

**Date:**
¶3730.12 Uniform Guidance Required Subaward Data Elements (2 CFR 200.331) and FDP Subaward Forms

- Federal Award Identification;
- Subrecipient name (which must match registered name in DUNS);
- Subrecipient’s DUNS number;
- Federal Award Identification Number (FAIN);
- Federal Award Date;
- Subaward Period of Performance Start and End Date;
- Amount of Federal Funds Obligated by this action;
- Total Amount of Federal Funds Obligated to the subrecipient;
- Total Amount of the Federal Award;
- Federal award project description, as required to be responsive to the Federal Funding Accountability Act (FFATA);
- Name of Federal awarding agency, pass-through entity, and contact information for awarding official;
- CFDA Number and Name; the pass through entity must identify the dollar amount made available under each Federal award and the CFDA number at time of disbursement;
- Identification of whether the award is R&D;
- Indirect cost rate for the Federal award (including if the de minimis rate is charged).

FDP Subaward Forms: http://sites.nationalacademies.org/PGA/fdp/PGA_063626
### Sample Subrecipient Invoice

**University of Minnesota – Office of Sponsored Projects Administration**

**SUBMIT INVOICE TO:** sub-inv@umn.edu  
Regents of the University of Minnesota  
Sponsored Projects Administration - Attn: Subaward Invoice  
200 Oak Street SE, STE 450  
Minneapolis, MN 55455-2070

Project Title:  
UMN Subaward Number:  
UMN Principal Investigator:

---

**SUBRECIPIENT**
Name:  
Address:

**PO#:** __________

**INVOICE DATE:**
**INVOICE No.:**
**INVOICE PERIOD:**

For Questions, Contact Name:  
Telephone:  
Email:  
Project Period of Performance:

*Subrecipient costs must be identified on each invoice by categorical line item in accordance with the approved

<table>
<thead>
<tr>
<th>Budget</th>
<th>Costs</th>
<th>Cumulative Cost Share/In-Kind</th>
<th>Program Income</th>
<th>Current Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Indirect Cost: **Rate**% of **Base**

<table>
<thead>
<tr>
<th>TOTAL</th>
<th>USD</th>
<th>$_________</th>
<th>$_________</th>
<th>$_________</th>
<th>$_________</th>
</tr>
</thead>
</table>

**Amount of Payment Requested:** **USD $_________**

*If receipts are in a foreign language. English translation must be attached.*

**Certification:** By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of the Federal award. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil, or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code, Title 18, Section 1001 and Title 31, Sections 3729-3730 and 3801-3812)

Subrecipient Official Authorized to legally bind non-Federal entity  
Make Remittance Payable to:  
Mail to:  
Date  
DUNS#:  

UMN Principal Investigator Signature of Approval  
Date  
DUNS#:  

---

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13730.14 Checklist for Principal Investigators Reviewing Subaward Invoices

University of Minnesota – Office of Sponsored Projects Administration

- Is the PRIME award fully executed?
  - ☐ Yes ☐ No

- Is the sub-recipient award fully executed?
  - ☐ Yes ☐ No

- Is the invoice (expenditures) within the period of performance of the agreement (must be incurred before the end date or after the start date)?
  - ☐ Yes ☐ No

- Are expenses on a cost reimbursable sub-contract charged based on actual expenses or appear to be on allocation of the budget?
  - ☐ Yes ☐ No

- Are the performance goals being met and does progress relate to expenditures?
  - ☐ Yes ☐ No

- Are the performance goals being met and do the expenditures align with technical progress?
  - ☐ Yes ☐ No

- Does the invoice contain the following statement:
  "I certify that all expenditures reported (or payment requested) are for appropriate purposes and in accordance with the provisions of the application and award documents."
  - ☐ Yes ☐ No

- Is the invoice signed by the sub-recipient?
  - ☐ Yes ☐ No

- Is there cost share required?
  - ☐ Yes ☐ No
  - If yes, has cost share been met?
    - ☐ Yes ☐ No

- Is subaward number indicated?
  - ☐ Yes ☐ No
  - If no, please indicate and circle

- Is Facilities & Administrative (F&A) cost calculated correctly on the invoice?
  - ☐ Yes ☐ No

- Request was made to sub-recipient for a NEW/REVISED invoice on the following date:
  Comments:

- Is this a final invoice?
  - ☐ Yes ☐ No

- If yes, please make sure of the following before payment can be made on the final invoice:
  - Is the invoice marked final?  ☐ Yes ☐ No

- If cost share, has cost share been met?
  - ☐ Yes ☐ No

- Subcontractor Release Form  ☐ Yes ☐ No

- Is PI the same individual at both Prime and Sub. Institution?
  - ☐ Yes ☐ No

  - If yes, invoice should be reviewed and approved by an alternate approver (Associate Dean for Research, Dept. Head)
¶3730.15  **Subaward Release Form**  
University of Minnesota – Office of Sponsored Projects Administration

Subaward #:________________________

Subrecipient Name:__________________________________________

**Section I – Financial Information**

The total amount of $____________________ has been received under this subaward.

☐ There are NO outstanding claims against this subcontract. The University of Minnesota is not obligated to honor claims made after this block is checked and this form signed and returned.

☐ Only the amount included in the Final Claims Voucher/Invoice estimated to be $____________________ is due. When the Final Claims Voucher/Invoice is paid by University of Minnesota, there will be no further claims against this subcontract.

**Section II – Patents**

☐ There are no inventions to be reported under this award.

☐ Listed below are all inventions required to be reported under this award.

Name of Inventor:__________________________________________

Site(s) of Invention:________________________________________

Please note that if an invention has resulted from this project, a complete invention disclosure must accompany this form, if one has not been previously provided.

**Section III – Federal Government Equipment**

Was any equipment provided by the Federal Government, or was any equipment purchased with federal funds provided under this subagreement?

☐ No  ☐ Yes (Please see FAR 52.245-1 (j) (4) Submission requirements and (j) (8) Disposition Instructions)

☐ All equipment either provided, or purchased with funds, under this subagreement has been delivered to the US Government or is awaiting disposition instruction

Date:________________________________________

Signature (Authorized Signatory):________________________________________

Printed Name:________________________________________

Title:________________________________________

*Complete all sections, check boxes as appropriate, and return to Office of Sponsored Project Administration, 450 McNamara Alumni Center, 200 Oak Street SE, Minneapolis, MN 55455-2070, Fax #612.624.4843, Phone #612.624.5599, awards@umn.edu*
¶3790 Knowledge Check

AIS editors

The Q&As at ¶3790.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3700 has been understood. Note: For the answer key for ¶3790.1, see ¶3790.3, which appears on a separate page (page 3790:5) for testing purposes.

Discussion topics at ¶3790.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶3790.1 Q&As

1. Circular A-110 defines an **award** as
   (a) Financial assistance that provides direct loans, loan guarantees, interest subsidies, or insurance
   (b) Financial assistance that provides support or stimulation to accomplish a public purpose
   (c) Financial assistance in the form of direct payments of any kind to individuals
   (d) Financial assistance in the form of contracts that are required to be entered into and administered under procurement laws and regulations

2. Circular A-110 defines a **subrecipient** as
   (a) A beneficiary of a federally subsidized program who is accountable for the use of federal monies
   (b) The legal entity to which a federal award is made and which is accountable for the use of the funds provided
   (c) The individual principal investigator who authored the funded proposal
   (d) The legal entity to which a subaward is made and which is accountable for the use of the funds provided

3. A **proposal with subawards** is usually prepared by the
   (a) PIs from the collaborating institutions
   (b) PI from the recipient institution
   (c) PI from the subrecipient institution
   (d) Program officer from the federal agency

4. The **office responsible for subaward closeout** ensures that all of the following takes place EXCEPT:
   (a) All required reports have been received and acted upon.
(b) The subrecipient has been paid and invention reports have been submitted.
(c) Any required property management reviews are performed as appropriate.
(d) Termination of grant notice is sent to the awarding federal agency.

5. **Important items to remember about subaward agreements include all of the following EXCEPT:**

   (a) The terms and conditions section of the subaward should address the specifics of the agreement.

   (b) Subawards should be co-signed by the federal granting agency official.

   (c) Subawards should be signed by the institution’s appropriate authorized official.

   (d) Subawards should contain contact names, telephone and fax numbers, and email addresses for the authorized official and administrative, financial, and technical contacts.

6. **The Model Subaward Agreement Form is the work of the**

   (a) Council on Governmental Relations

   (b) Office of Management and Budget

   (c) Grants.gov program office

   (d) Federal Demonstration Partnership

7. **Which of the following is NOT generally used to determine the level of risk a particular subrecipient presents with regards to the threat of improper stewardship?**

   (a) Subawards to public institutions carry greater risk than do subawards to private institutions.

   (b) Programs with complex compliance requirements have a higher risk of noncompliance.

   (c) The larger the percentage of program awards passed through, the greater the need for subrecipient monitoring.

   (d) Large dollar awards are greater risks.

8. **The pass-through entity must**

   (a) Ensure that subrecipients have no audit findings

   (b) Perform an audit of all subrecipients

   (c) Ensure that subrecipients take appropriate and timely corrective action on all audit findings

   (d) Monitor subrecipients according to A-121
Discussion Topics

1. How does the relationship between the sponsor and the awardee differ from the relationship between an awardee and a subawardee?

2. What does it mean to monitor a subrecipient “before, during, and after” an award?

3. Practically speaking, are there any differences — and if so, what are they — between issuing a subaward under a federal award and a subaward under a nonfederal award?

4. Recently, federal agencies’ offices of inspectors general have been targeting subawardees for audits. What kinds of things are they reviewing and what are they finding? Are there any lessons to be learned from these audit reports for your institution?

5. Do you have any grants (or contracts) funded with monies under the American Recovery and Reinvestment Act (ARRA)? If yes, do any of the grants have subawards? If yes, have you determined how you are going to report on these subawards? Are you going to delegate certain reporting responsibilities to the subawardees? Do you know which requirements can be delegated and which you, as the prime recipient, are responsible for reporting?

6. Do you make use of a subaward template? If yes, do you periodically assess the template to ensure that it is remains an up-to-date and helpful document?

7. Do you ever have third-tier subawards? Why do such agreements require careful attention?

8. How does your department’s organization structure facilitate subrecipient monitoring? If it hinders, rather than facilitates such monitoring, explain how the situation could be improved.

9. Does your institution periodically review its subrecipient monitoring practices to ensure their continued effectiveness?

10. Do you provide help for a subrecipient, upon request, with budget preparation and other administrative requirements?

11. What special considerations must there be when subawarding to international institutions? Does your institution have separate or additional policies to address these types of agreements?

12. Are you, as the prime recipient, assessing the correct criteria and making the correct judgment as to whether the relationship is one of a subrecipient or vendor? What is the criteria and how is it applied at your institution?

13. Are you, as the prime recipient, using the Federal Demonstration Partnership model subaward agreement for subrecipient agreements under federal assistance funding?

14. Is your subrecipient agreement drafted in a way that adequately and clearly (without ambiguity) represents the interests of the sponsor, the prime recipient, and the subrecipient?
¶3790.3  **Answer Key**

Following are the correct answers to the questions included at ¶3790.1.

1. (b) Financial assistance that provides support or stimulation to accomplish a public purpose

2. (d) The legal entity to which a subaward is made and which is accountable for the use of the funds provided

3. (a) PIs from the collaborating institutions

4. (d) Termination of grant notice is sent to the awarding federal agency.

5. (b) Subawards should be co-signed by the federal granting agency.

6. (d) Federal Demonstration Partnership

7. (a) Subawards to public institutions carry greater risk than do subawards to private institutions.

8. (c) Ensure that subrecipients take appropriate and timely corrective action on all audit findings
PLACE TAB

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Assessing the Sponsored Research Office
Chapter 3900
Assessing the Sponsored Research Office

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§3901 Introduction
Richard Seligman, Ed.D.
Associate Vice President for Research Administration
California Institute of Technology

This chapter provides guidance to institutions on assessing sponsored programs offices and describes assessment tools and ways to use them effectively.

Undoubtedly, there are some research administrators who believe that an assessment of their office is something that is done to them. Peggy Lowry, formerly of Oregon State University, will easily convince most readers that an assessment of their office is something that is done for them. Lowry argues most persuasively that periodic assessment of the effectiveness of a sponsored programs office is an important part of the institution’s ongoing compliance program. Lowry provides extensive information on the two primary forms of assessment: self-directed and externally directed. The reader will quickly come to realize that assessment is not limited to bringing in high-priced consultants for a quick look at what’s going on. Many forms of assessment are possible with a modest investment of resources.

In a series of seventeen figures at the end of the chapter, Lowry provides an extensive “tool kit” of assessment materials that are easily adaptable to meet local sponsored programs office assessment requirements. These tools include survey questions, a framework for self-audit, sample site visit itineraries, and information sources for evaluators.

This chapter will continue to respond to the information needs of research administrators through the addition of new material. Future updates will contain revisions, additions, and enhancements to §3905, as appropriate. Content added to other sections of the chapter will provide readers additional discussions of related topics (at §3920), practical tools (at §3930), and case studies (§3940). A “knowledge check” containing Q&As and discussion topics is included at §3990.
Assessing the Sponsored Research Office

Peggy S. Lowry
Director (retired), Office of Sponsored Programs and Research Compliance
Oregon State University
Director, NCURA Peer Programs

In recent years offices of sponsored programs (OSPs) have received increased attention from many outside entities, including regulators and media. The oft-time resulting exposure, sometimes at the national level, can cause reputational harm to the institution accompanied by fines. The variety and level of external — and resulting internal — scrutiny of the OSP operations will continue to increase. This heightened scrutiny is occurring at the same time as the complexity of sponsored program operations continues to increase.

Therefore it is imperative that OSPs be diligent in monitoring operations and instituting management practices that regularly implement assessment activities. Such activities can ensure that all aspects of the operations are compliant with applicable institutional and sponsor requirements and meet the needs of various stakeholder groups. In some institutions, nonfinancial compliance, such as that involving human and animal research protections, may be a function housed separately from the OSP. However even if organizational structure places compliance in a unit or units separate from the OSP operation, or the sponsored programs operation is spread out among different offices and reporting lines, everyone involved in sponsored research administration plays a role in ensuring that the institution is diligent in and accountable for managing compliance.

This chapter explores a number of approaches to conducting assessments and presents models for and considerations when incorporating these activities as a standard OSP management practice, including how to prepare for and make best use of the results of any assessment activity. An OSP does not need to use all of the forms of assessment described in this chapter in order to have an effective assessment program. Most likely an OSP will find that an assessment program incorporating a combination of the approaches described will provide a balanced assessment appropriate for a specific institution.

Note: For ease of reading, most of the figures referred to in this chapter are included at the end of the narrative.

What Is Assessment?

Research administration provides service to the institution and its constituents. It contains elements of facilitation and management and both elements need to be in synch with current needs and compliance requirements. An assessment process helps maintain an appropriate balance. Some liken this assessment process to a course correction for a navigator of a ship.

Assessment is simply looking at what one does, how it is aligned to needs and expectations, and how well one is doing it. Assessment is an activity that can be
undertaken at any level within an institution. At any given time, one is likely to find some form of assessment activity going on at some operational level. At the broadest level is institutional accreditation. This assessment process uses nongovernmental organizations to review independently and credential the organization in such areas as governance and administration, financial stability, admissions and student services, institutional resources, student learning, institutional effectiveness, and relationships with internal and external constituents.

Academic departments and programs also employ periodic program assessments that typically follow a similar pattern to required institutional accreditation in terms of scope and process. Athletic departments regularly undergo a self-study and accreditation. Institutional fiscal operations undergo review through internal audit activities that are intended to determine the adequacy, efficiency, and effectiveness of internal controls and the reliability and integrity of various systems (e.g., management, financial, and operating). Faculty and staff are routinely assessed through promotion and tenure processes and performance evaluations.

**Why Consider an Assessment Program?**

Despite being part of an environment where assessment is common, often the sponsored programs office does not participate in or conduct periodic assessment activities. Today, however, an OSP can ill-afford to ignore the increased variety and level of attention accorded it by outside entities.

Numerous institutions have had human subject programs that were shut down due to noncompliance. Recent qui tam (whistleblower) lawsuits have exposed institutional practices that were functioning improperly. Additionally recent not-for-cause or proactive site visits from federal agencies have raised considerably the visibility of institutional practices as implemented by OSs. Activist groups have raised the public awareness of and interest in institutional compliance.

Beyond minimizing risk from exposure, assessment helps OSs be in line with institutional priorities and directions. As institutions shift to more complex partnerships and global relationships OSs need to be fully responsive with knowledge and staffing.

It is therefore critical that OSs be diligent in monitoring operations in order to maintain the integrity of and ensure that all processes of the operations are fully compliant with applicable internal and external policies and requirements.

Assessment, however, does more than help an OSP ensure that operations are compliant. Regular reviews of sponsored program offices also can be part of an institutional compliance and ethics program, as described in the U.S. Sentencing Commission Guidelines. Under these guidelines, the two components of a compliance and ethics program are promoting an organizational culture that encourages ethical conduct and exercising due diligence to prevent and detect misconduct. A regularly implemented assessment can address these two goals. Demonstrating a compliance and ethics program may help mitigate penalties if an organization is found guilty of a criminal

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offense. (See Chapter 1500 for an in-depth discussion of research compliance.)

**What is an Assessment Program?**

An assessment program integrates an evaluation component in an ongoing basis with a defined cycle of activities. Thus, an OSP has a continuous stream of information about performance, customer needs, and financial and non-financial compliance management.

**Designing an Assessment Program**

Although there is a great variance in institutions and research administration operations, there are common elements to an assessment program.

- Areas to be assessed
- Stakeholders engaged in the assessment
- Form of assessment
- Frequency

As an assessment program is designed, the resulting information feeds back into operational improvements and efficiencies.

**Figure 1**

In this manner, specific elements of an OSP undergo periodic review with results either validating current processes or identifying weaknesses to be addressed. It is essential that the assessment program include an overall program assessment in addition to the specific area reviews. This allows a holistic review and can help determine how well the areas interface and are connected.
3905.2 Preparing for Assessment

Any assessment activity requires some level of resources and planning. If assessments are not already incorporated into management practices, this should be done by the office’s director or higher-ups, as appropriate. The first step in conducting an assessment is to determine its objectives and goals. In general there are two basic categories of assessments that will help focus one’s efforts:

(1) Single issue: An assessment may be focused on, or driven by, a particular function, complaint, or risk area. In implementing an assessment for a single issue, it is important to choose one or more forms of assessment that will provide the specific information needed to address the identified issue. When this approach is used, the assessment activity is a “one-time,” rather than an ongoing, activity. (The assessment tool used to conduct the assessment is often then “shelved” until needed again.)

(2) Ongoing program: An assessment may be developed as a regular, programmatic activity to monitor and review the operation. This approach uses one or several techniques to provide continual feedback, which is then used to guide decisions about necessary changes to the operation.

A successful assessment is one that
◆ objectively looks at an area,
◆ includes all appropriate views from stakeholders,
◆ is led by individuals with expertise in the area,
◆ generates credibility through the process, which leads to credibility in the results,
◆ produces results that are useful for future planning and/or decision making,
◆ balances the reality of office budgeting and staffing with existing OSP responsibilities and services,
◆ recognizes politics and “turf” issues, and
◆ is sensitive to the concerns and fears that such a process can generate.

Regardless of the form of assessment used, or whether the assessment is used to address a single issue or as an ongoing activity, there are important considerations that should be addressed in planning for a successful assessment. Such considerations are discussed below.

Office Structure

There are countless ways to structure a sponsored programs office. What works for one institution may not work for another. The size of the operation can extend from a single-person shop to a large, multunit operation with dozens of staff members. The office may include pre-award, post-award, contracting, and nonfinancial compliance functions, or any combination thereof. The sponsored programs office may encompass functions managed by separate offices that have different reporting lines within the institution. (See Chapter 300 for a discussion of OSP organizational models.)
When an OSP is initiating an assessment, or responding to one, the office needs to look at its organizational model to determine

1. who is automatically involved in the assessment activity,
2. who needs to be invited to be part of the activity, and
3. who should (needs to) be kept apprised of the activity.

Team Building. All assessment activities have the potential for team building, whether one is building teams from among OSP staff or among staff from different departments. Because assessment is a reflective process used to analyze operations and uncover potential areas for improvement, it is valuable to seek a wide range of views and perspectives in planning for and during the process.

Communications

Communication throughout the assessment process is critical to engaging individuals in the process and in improving its chances of success. Because the assessment activity can involve numerous stakeholders from various institutional offices, there is not one communication model that will apply to every situation. However in planning an assessment activity, it is important to schedule the following:

- An appropriate pre-assessment communication that includes the why and scope of the assessment
- Regular communications during the assessment that include updates on the status and next steps in the process
- A post-assessment communication that covers outcomes and future actions

As appropriate for the type of assessment used, the following stakeholders may be recipients of an initial and regular communications concerning the activity:

- Senior administrators: Before embarking on any assessment activity, senior administrators of the institution should be informed and then kept up to date on a regular basis. Even self-directed activities can raise questions or expectations from faculty or other institutional units, and in keeping senior administration informed of activities they will be better able to respond to such questions. Communication also can be used to educate and inform senior administrators on the important role of the OSP and the way it supports the research priorities of the organization.

- Sponsored programs staff: OSP staff should be well informed on the process and activities. Assessment often brings a heightened level of concern and anxiety to staff (concern about their position, possible changes to the organization, and “the unknown”). Frequent communication with staff members and providing them opportunities to ask questions will help staff appreciate the positive aspects of assessment.

- Other administrative personnel: Related offices at the institution should be aware of the assessment activity, even if they are not directly involved.

- Faculty or academic personnel; department research administrators: Depending on the type of assessment activity, faculty, academic administrators (usually deans...
or department heads), and department research administrators may need to be included in the communications process.

Resources

Every assessment requires some investment of resources. The largest resource investments will be in personnel costs and in such activities as data collection, data analysis, and report writing. There is a “management cost” with all assessment activities that could include time commitments from managers ranging from the director of sponsored programs to an institution’s senior administrator. There may be dollar outlays for creating and implementing surveys or for consultants. Before proceeding with an assessment activity, be sure the necessary resource commitments have been obtained. (Chapter 700 includes a lengthy discussion on the use of data from information systems to support an OSP’s assessment activities.)

Risks

Any assessment activity can bring with it the potential for some “risk.” For example some participants may be concerned over how results of the assessment will be interpreted or used. There is the risk that a process or policy that is found to be noncompliant could carry associated costs to correct it. There is the risk that staff morale or the office’s credibility could suffer in the event of negative findings. There is the risk of raising stakeholders’ expectations for change. With any assessment that involves surveys of faculty, there is potential that faculty opinions may be based on a misunderstanding of the OSP functions and that such misunderstandings as reflected in the survey results would be misinterpreted or generalized.

Before embarking on an assessment, an office should do a risk assessment to consider the range and types of risks that may be related to the type of assessment planned. Once risks are categorized, the office can consider how to minimize those risks. For instance, if an identified risk area is concern about a noncompliant aspect of the operation, OSP could initiate some self-directed audits, or use of the institution’s internal audit, to help identify aspects that may need immediate attention. Or, if an identified risk category relates to an institution’s decreased budget and resulting downsizing of operations, an office may want to speak with senior administrators about the timing of an assessment.

The Assessment Program

When assessment is an ongoing process where the intent is continual improvement of operational quality, the process is as critical as the results. After an assessment activity, it is imperative to invest the time and resources necessary to ensure that the methods employed are subject to the highest quality standard prior to the next assessment cycle. (See also “Quality Improvement Program” section on page 3905:20.)

In looking retrospectively at the process, one should be sure to

◆ review critically the process and consider ways in which it can be improved and solicit opinions from sponsored programs staff, individuals involved with the assessment, and reporting units;
◆ consider the types of information useful to and needed for the assessment and if there are operational changes that can be made to produce this information in anticipation of the next assessment activity; and

◆ analyze other models of assessment used by peer institutions and determine whether those models can be incorporated into the next assessment activity.

**Background Materials**

The types of information used in preparing for an assessment depend upon the form and focus of the assessment, as well as whether the evaluators will be intimately knowledgeable of the OSP operations and the institution. In general most assessments will make use of general information as outlined below.

*For broader assessments and when using evaluators from external organizations,* the following types of background information are useful:

◆ Information about the institution, including such things as academic statistics, rankings, college and institutional organizational plan, and an institution’s strategic plan

◆ Information about the OSP reporting unit, including such things as organization, functions, reporting unit strategic plan, and staffing

◆ Information about the OSP, including such things as OSP strategic plan, budget, functions, organizational structure, and the results of prior self-studies or self-audits and evaluations

*For broader assessments and when using evaluators from within the institution,* the following types of background information are useful:

◆ Information about the OSP reporting unit, including such things as organization, functions, reporting unit strategic plan, and staffing

◆ Information about the OSP, including such things as OSP strategic plan, budget, functions, organizational structure, and the results of prior self-studies or self-audits and evaluations

*For more focused assessments and when engaging individuals from within the institution,* information specifically focused on the topic of the assessment is most useful. With assessments such as internal audits, the information will focus specifically on process and policy details. With assessments such as focus groups, background materials, as appropriate, should be provided to attendees.

**Small Institutions**

At most small institutions, the culture and focus of the institution is on teaching and service. Among academic units there may be uneven support or encouragement for faculty to pursue sponsored program activities. The role and the value of the sponsored programs office may not be well understood, or uniformly understood. When an OSP at such an institution undertakes an assessment activity, it is especially important that the senior administration has endorsed an assessment activity and that the assessment reflects the institutional expectations for faculty (e.g., if the
institution expects faculty to teach, the assessment should not suggest a significant
departure from that expectation). (Chapter 2300 addresses special issues for pre-
dominantly undergraduate institutions.)

¶3905.3 Forms of Assessment

There are numerous techniques to assess operational effectiveness. To take a broad
look at operations, a formal programmatic evaluation of an entire operation may be
appropriate; for a narrower look, a more focused audit of a single area or function
may be called for. All assessment techniques can provide a unique perspective on
the operation and will help the OSP gather information and consider options for
improvement. Many of the activities discussed here can be used separately to assess
a particular issue or area, or several of the techniques/approaches can be combined
and employed to provide a broad range of data and/or perspectives.

There are two main categories of assessments: self-directed and externally
directed. Figure 3905.3-1 outlines the basic types of assessments, each of which is
discussed briefly below.

**Figure 3905.3-1**

<table>
<thead>
<tr>
<th>Assessment Activity</th>
<th>Sponsored Programs Office</th>
<th>Institutions</th>
<th>Peer Institution / Consultant*</th>
<th>State or Federal Agency</th>
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<td>✓</td>
<td></td>
<td></td>
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<td>Advisory Group</td>
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<td>Focus Group</td>
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<tr>
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<tr>
<td>Investigation</td>
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</table>

*Activities are generally undertaken at the request of the sponsored programs office or the institution.

**Self-Directed Assessment Activities**

The following are various types of self-directed or self-generated assessment activities. Several of these approaches are discussed in more detail in the sections following this outline.

*Retreat.* Retreats allow office personnel, typically at a remote location, to engage
in a focused discussion of their operation without the usual day-to-day interruptions. Retreats may involve other select individuals or groups (such as a facilitator, advisory group members, reporting unit personnel, or staff from other offices).

Advisory Group. Numerous offices have established an advisory group or body that serves as a resource for feedback or direction. The advisory group can help a research administrator obtain a reading on faculty or departmental research administrator viewpoints and is useful for ongoing assessment. Advisory groups normally represent stakeholders and might contain a mix of junior and senior faculty, administrators, or related office representatives.

Focus Group. A focus group is a relatively quick and low-cost mechanism for gathering information. It typically consists of 8-10 individuals who participate in a “group interview” led by a facilitator. A facilitator could be a consultant or someone from inside the institution. For an effective focus group, OSP should not be present during the discussion.

Survey/Evaluation. A common form of collecting information is through the use of a survey or evaluation. Evaluations typically are targeted at a specific service or function of the office and often are given to users at the time they access the service, such as evaluation forms passed out to attendees of training or educational offerings. Surveys are often used to gather customer-satisfaction feedback from a broad-based population.

Metrics and Benchmarks. Metrics are measurements of attributes of the operation. Metrics can be applied to personnel, services, or value judgments, such as statistics on personnel effort or value of an educational offering to participants. Metrics that are collected consistently over time can be used for trend analysis and projections. They are an excellent management tool for looking at how well the office is performing currently and providing a basis for future direction. Metrics can be both a type of assessment as well as information used in an assessment.

Benchmarks are standards and are used to examine a particular aspect of the operation and how well it relates to that standard. Post-award accounting operations typically have benchmarks for major functions (such as expected turnaround for cost transfers or award closeout). Benchmarks and metrics are often used together.

Self-Audit. Self-audits are an essential component of monitoring performance in that they are used to identify problems and then to help address them. An audit of any process of the sponsored programs operation can be performed by office staff, whether that function is pre-award, post-award, nonfinancial compliance, or something else. Increasingly institutions are conducting audits of animal and human research programs and extending the audit to encompass not only central processes but also an investigator’s records and processes.

Self-Study. This process also may be called self-assessment or self-review. A self-study is a method whereby the sponsored programs office conducts a critical self-review of what it is doing, why it is doing it, and what it believes needs to be done to improve performance. A self-study is more than an audit in that it looks at

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the overall functioning of the operation and how well that operation performs and interacts with key stakeholders. It explores what specific functions and services are performed and whether performance can be improved.

Typically offices will conduct a self-study every five or six years as a means to document operational changes and as a basis for continued quality improvement. The self-study is an easily executed review process. However, due to the inherent bias that invariably occurs with staff looking at their own operation, this approach may lack credibility outside the OSP.

**External Evaluation.** External evaluation is the process whereby individuals external to the sponsored programs office conduct a review of the entire operation or a particular aspect of the operation. As with the self-study, this review is typically broader than an audit and tends to focus on how the operation relates to its customers or stakeholders and how well the office is positioned for emerging needs.

External evaluators may be individuals from within the institution. Frequently the external “evaluator” is a faculty team that is appointed by an OSP’s higher-ups and charged to look at the overall effectiveness of the sponsored programs office. Another common model is to hire consultants from peer universities, consulting companies, or professional organizations to conduct the evaluation. The evaluators usually provide a report of their findings after conducting their review.

**Quality Improvement Program.** Unlike the forms of assessment previously discussed that focus on the effectiveness of the sponsored programs office, a quality improvement program focuses foremost on the institution and the systems throughout the institution that interface with and support the institution’s overall research enterprise. This type of program often is routine and part of an integrated, system-wide management practice.

**Externally Directed Assessment Activities**

Some types of “assessment” activities are not self-initiated nor are they really assessments, but are driven by external entities. Even these types of activities generate valuable information that an OSP can use to evaluate and improve its operations.

**Audit.** The audit tests, or objectively assesses, whether management practices and policies are being followed. Audits focus on a “slice” of the operation and the controls that are in place for minimizing risk. In looking at a cross-section of the operation, the audit reviews a process or policy and assesses if associated practices are following the process and policy, or if a practice suggests a risk area within a process or policy that needs to be addressed. Audits are excellent for identifying a process weakness.

The internal audit division of an institution typically performs audits on operations or processes that are identified through an institution’s risk assessment. As applied to sponsored programs, internal audits often focus on financial operations. Similarly external audits, such as the Office of Management and Budget audit or a federal desk audit, may evaluate some of the same processes on a system or project scale.

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3 NCURA Peer Programs – www.ncura.edu/InstitutionalPrograms.aspx
Not-for-Cause Review. Increasingly OSP operations are receiving a variety of not-for-cause, proactive, or friendly site visits. Some of these visits, such as when the U.S. Department of Health and Human Services Office of Inspector General stops by to look at effort reporting records, are driven by a need to assess risk or vulnerability. The site visit is a means to gather data. Other visits may center on looking at program implementation, such as those by the Centers for Disease Control and the U.S. Department of Agriculture to examine select agent programs.

Investigation. Investigations stem from a complaint or identified incidence of non-compliance and result in a formal review of some or all of an OSP operation. While a research administrator does not often think of investigations in the context of assessment, they can be in fact a very thorough assessment of a particular process and provide valuable feedback. Investigations may be conducted by individuals within the institution or by investigative units of the federal government or other bodies.

13905.4 Using Focus Groups for Assessment

As mentioned focus groups are a relatively low-cost and quick-turnaround technique for gathering information on a particular topic or set of topics. A focus group typically consists of 8-10 individuals who participate in a “group interview” led by a facilitator. A facilitator who is unaffiliated with the OSP could be hired to conduct the focus group if a sensitive topic is scheduled to be discussed or if the discussion could be biased if led by a representative of the sponsored programs office.

In planning a focus group, the first thing to consider is what aspects of the sponsored research operations one wants feedback on and what type of questions will best stimulate the discussion to provide the desired feedback. The following are good examples of the types of topics about which focus groups could provide solid feedback include the following:

- **Electronic systems:** How are users interacting with electronic systems? What barriers to use exist? What user needs are not being met? What system inefficiencies are there?

- **Policy changes:** How will a policy change affect a particular process? What is confusing about a specific policy? Why are there recurring instances of noncompliance involving a particular policy or procedure relating to the policy?

- **Services:** What services are of most value/least value? What services need to be improved? How does someone find out about OSP services?

After identifying a particular topic or topics for a focus group, one must next consider the type of individuals — often persons who can best speak to or have ample experience with an issue — to invite to be members of the group. In many cases more than one focus group, each with different members, will be necessary to ensure that feedback from many different perspectives is obtained.

Faculty members are especially important stakeholders for an OSP to consider as members of a focus group. They are likely an OSP’s largest — and most vocal — customer base. As one gathers feedback on various aspects of an OSP operations,
understanding faculty concerns and hearing their suggestions can help guide constructive change. As one develops a faculty focus group, it is important to consider the different perspectives that one would receive from senior faculty, junior faculty, and postdoctoral staff.

Other important stakeholders to invite to participate in the focus group could be department research administrators and department chairs. It is also important to include possible critics in a focus group; even negative feedback is valuable. Figure 2 is a sample notice provided to focus group members in advance of the meeting. (Figure 2 is included on page 3905:24.)

13905.5 Using Surveys for Assessment

Surveys of users or recipients of services are a common way of gathering information about both the need for and perceived value of existing services. When one decides to use a survey to collect information, it is recommended that someone knowledgeable in the theory and methodology of survey research (such as someone associated with a survey research lab) be consulted to ensure that questions are correctly worded, populations are appropriately identified and sampled, and data is correctly compiled.

When surveys concerning an OSP’s operation are developed by other groups (such as external evaluators), the surveys should be developed in close cooperation with the OSP, so they will appropriately reflect the relevant issues, convey the right tone, and use the right “jargon.” The following are some considerations in developing surveys:

(1) Surveys can serve as a means to promote and raise the profile of an office. One should consider the survey as a marketing tool and take advantage of that process to widely share information about the OSP’s services and activities.

(2) Many surveys ask readers to rate a particular item (e.g., an office, newsletter, or service). In doing so, the survey often relies on the reader’s ability to “recognize” the name of a particular thing. This could create a problem in a large institution with highly centralized offices and functions and diverse departments. In such situations, the survey taker could have trouble, for example, remembering that a particular service was provided by the OSP.

(3) A number of surveys ask for accurate recall of actions (e.g., “indicate the number of times you used” a particular service or “indicate whether you received an award” as a result of using a particular service). The reliability of results could diminish when respondents must rely heavily on memory to complete the survey.

A written anonymous survey provides the means to elicit feedback and reactions that are difficult to obtain in group or individual interviews or discussions. Use of tools such as Survey Monkey allow for easy response and compilation of results. Figures 3-5 include sample questions that could be included in assessment surveys for three different audiences: faculty, department heads, and OSP staff. (Figures 3-5 are included on pages 3905: 25-34.)
Using Metrics for Assessment

Research administrators, particularly managers and directors, need quality data in order to make good decisions. Well-defined metrics (measures or measurements) are central to an effective assessment program. In looking at sponsored programs operations, there are three general categories of attributes that can be measured and that will assist with assessment activities:

- operational metrics such as turnaround time for processing a proposal or turnaround time to issue a subaward;
- customer service metrics such as workshop attendance numbers or value to attendees of an educational workshop; and
- individual performance metrics such as number of proposals, awards processed by individual sponsored programs staff, or number of inquiries answered during a certain time period.

Some of the metrics represent “objective” measures (like turnaround time); others are “subjective” (such as “value of a service”). It is important to invest some time in identifying which OSP functions have associated metrics that are within the office’s capability and resources to collect. It is also important to determine how each of those measurements will help one assess the OSP operations.

Once measurements are identified, a process for collecting and recording the data should be devised. Some data can be strictly quantitative and collected through simple forms, and then compiled using spreadsheets. Other data may be obtained through a representative sampling. Sampling is a subset of data drawn from a more comprehensive set of data used to represent the whole. Figure 6 is an example of a form used to collect a representative sampling of staff effort, collected over a two-week period. (Figure 6 is included on pages 3905:35-37.)

An important consideration in developing metrics is to devise a method for their collection and display that is consistent over time. This allows data to be used for trend analysis or, for example, as a measure over time of the effect of specific operational changes implemented. Figure 7 discusses the OSP staff tracking system in place at one institution. (Figure 7 is included on page 3905:37.)

Using Self-Audits for Assessment

Self-audits provide snapshots of how effectively office processes and procedures are working. They serve as indicators of where things are working well and highlight risk areas needing attention. Further they can provide research administrators information to help them address problem areas.

A self-audit is easily executed. A simple approach is to take a specific written policy or procedure and track it to the actual “process” that is in place. The intent is to determine how well the process maps to the policy or procedure (which may suggest some adjustments to either the written policy/procedure or to the process) and then analyze whether there are any inefficiencies that should be corrected. This process involves mapping policy/procedure, process, and individuals involved in
each step. The self-audit can be conducted by a single individual within the office or by a group of individuals. In nonfinancial compliance areas, committees (administrators and/or faculty) may be formed to conduct a self-audit of compliance processes in place.

To be effective for programmatic purposes, a self-audit must be an ongoing activity. When changes are made to operational policies or procedures, a self-audit can provide necessary feedback as to how well the changes are functioning. As such the self-audit allows one to continuously monitor changes to operational processes or policies.

A helpful framework for a self-audit program is found in Managing Externally Funded Research Programs: A Guide to Effective Management Practices, published by the Council on Governmental Relations (COGR).4 The guide lays out core principles of management systems and internal controls that should be part of an assessment activity. The core principles become the basis for the review process and can help one assess risk areas and redundancies and devise improvements. The COGR framework for a self-audit program is included as Figure 8. (Figure 8 is included on page 3905:38.)

**Using Self-Studies for Assessment**

As discussed earlier, the “self-study” is a critical “self-review” of what an OSP is doing, why it is doing what it does, and what can be done differently or better. A self-study does not need to be an onerous task. If an office’s management practice is to conduct a self-review periodically, then each subsequent review should build upon the results of all previous ones.

The self-study is not to be confused with an operations manual that defines the step-by-step procedures and tasks associated with an OSP. Rather the self-study should
◆ answer critical questions about functions,
◆ provide metrics where possible, and
◆ result in some analysis of strengths and weaknesses, level of effectiveness, and needed improvements.

There are several approaches: two common approaches are for the office director to write a self-assessment document or a staff committee to create the document. Regardless of who conducts the study, the general sequence of activities should flow as follows.

**Time Frame**

A time frame for conducting the self-study must be established. In scheduling the self-study it is important to consider the impact on the individuals’ time who are involved in the activity and the time of year (staff’s availability may ebb and flow depending on the season). Depending upon how in depth and detailed the assessment will be, the time frame for conducting it could be as short as a few weeks or as long as several months.

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Staff Roles
One or more individuals will be involved in pulling together information, developing metrics, and writing the document. One should not overlook the importance of involving staff in this process. It is important to maintain frequent communication with staff so they understand the purpose of the self-study; assessments often unnecessarily create anxiety and concern among staff members. The self-study in particular is an excellent opportunity for team building. It can afford staff opportunities for critical thinking about their own processes and functions. Figure 9 is a sample outline for staff participation in a self-study. (Figure 9 is included on page 3905:39.)

Focus and Content
The general areas that will be covered in the self-study must be determined. Within the framework of each defined area, one should carefully consider the critical questions that should be asked so as to elicit feedback on the strengths and weaknesses of the particular aspect of the operation under study. Following are several broad sections that should be part of a good self-study:

◆ Introduction: The introduction provides a general overview of the scope of the office, the organizational placement of the office within the institution, and the unit’s relationship to other related university offices.

◆ Infrastructure and management: This section covers management and the strategic planning process. It should address staffing levels, training, and how staffing relates to the overall academic environment (including faculty, department and college counterparts, and other central offices). There should be a discussion in this section on management philosophy and budget.

◆ Institutional responsibilities: This section discusses existing office policies and the process for policy development, implementation, and review. In addition to policies, there should be a discussion on operational processes and practices with special attention to how they relate to federal, state, and university rules and regulations. An assessment of data and records management (both paper and electronic) should be included.

◆ Service, outreach, and connectivity: This section discusses relationships with key stakeholders that are both internal and external to the university. This includes assessing communications channels to and from those groups. Some stakeholders may be recipients of office services (such as faculty), while other stakeholders may be regulatory in nature (such as the office of human research protection). Outreach and education/training functions of the office should be described and assessed in this section. Figure 10 includes an example of questions that can help one assess a specific educational/training program. (Figure 10 is included on page 3905:40.)

◆ Metrics: This section looks at data collected for or available as part of the self-study. Such data may include number of proposals, awards, or subawards; number of educational offerings; numbers for protocols in the compliance areas; and statistics on areas of staff effort, turnaround time on issuing subawards, or
numbers of inquiries to the office. Metrics may include summaries of previous evaluations or surveys that have been conducted by the office and any available trends or patterns of-use data. Metrics is perhaps one of the most powerful parts of a self-study and adds impact when discussing upward or downward trends. Figure 10 includes an example of the types of metrics that could be used to analyze one educational/training program. (Figure 10 is included on page 3905:40.)

**Content Specifics.** Researching content for the self-study is a process of gathering and analyzing background information relevant to identified areas to be studied. Reviewing any OSP “marketing” materials describing services offered is an excellent starting point for determining what should be looked at in the self-study. One should be sure to look at any existing OSP operational data, including

- annual reports,
- documents gathered in support of requests for budget or staff increases,
- responses to complaints,
- audit findings, and
- materials prepared for a new senior administrator.

Also look at any institutional reports or communications about the office prepared by other groups. Individuals who know the OSP operations well can be excellent resources for background information. As one defines the content for the self-study, if time permits, be sure to use a variety of techniques for gathering information, such as focus groups of targeted populations and stakeholder surveys.

**Analysis.** A self-study is intended to assess what the office is doing, why it is doing it, and what needs to be done to improve performance. When viewed as such, the analysis of a particular function should include questions designed to produce feedback that will enable one to reach conclusions or consider directions for change. The analysis should reflect critical thinking, challenging current practices as relates to best practices at peer institutions. Not only can an analysis lead to operational change, it may additionally identify resource needs.

**Final Report**

The final report of the self-study should be a comprehensive document that describes the areas looked at as part of the self-study and presents a critical review of strengths and weaknesses uncovered, supported by relevant analysis and data.

**13905.9 Using External Evaluations for Assessment**

External evaluations typically follow the same general process as a self-study. Although good management practices would regularly schedule programmatic external evaluations, when a regular cycle is not in place, external evaluations often are prompted by a change in leadership or occur after a reorganization, or in response to a surge in complaints.
Setting Up the External Evaluation

The first step in an external evaluation is for the OSP or initiator of the evaluation (which may be a reporting unit or a senior administrator) to define the purpose of the evaluation. The purpose should be articulated clearly and understood by all parties involved. In some cases, the purpose may be a state mandate that requires regular evaluations of administrative programs of institutions of higher education.

Answers to the following questions will help to clarify the review parameters and orient the evaluator to the goals and purpose of the review. (Although oriented for the external evaluator, these questions could be adapted for a self-study.)

◆ What factors have contributed to conducting an evaluation at this time?
◆ Are there plans for any other groups to additionally be involved in evaluating the office?
◆ How has this office been evaluated in the past? Was this in keeping with the typical form/frequency for the institution? Has there been a recent self-study?
◆ What expectations are there for the evaluator(s)?
◆ Who are the primary stakeholders that are interested in this evaluation? Why?
◆ What major areas are to be evaluated? Why those areas? What unique problems have been identified in those areas?
◆ What major areas are not to be evaluated? Why are those areas excluded?
◆ Will other evaluation activities besides the evaluator(s) be used (e.g., a faculty survey)?
◆ What expectations are there for the review findings?
◆ Will the evaluation report include recommendations, or will the report cover only the defined evaluation?
◆ Are specific uses already defined for the evaluation report (reorganization, budget reallocation, program improvement, other)?
◆ What lines of communication should the evaluator(s) have to: office undergoing review, office advisory committee, reporting unit, other.
◆ What level of communication do you expect or want with the evaluator(s) throughout this evaluation?
◆ What resources (including staff support) are available to the evaluator(s) to carry out some of their tasks (dollars, professional survey researchers, office staff)?
◆ Other than a draft final report (for correction of erroneous data) and a final report, are other reports or briefing sessions expected/desired?

After the purpose of the evaluation is defined, generally the next step is to select the evaluator(s). Potential evaluators should be carefully considered in terms of

◆ traits and skills that are necessary for the conduct of the evaluation (e.g., interpersonal skills and reputation for delivering on promises made);
knowledge of the research administration field appropriate to the type of OSP operation;

awareness of national trends and issues impacting research administration; and

credentials that will support further the acceptance of the evaluation results.

The evaluator(s) should receive a written “charge” letter that details the scope and purpose of the evaluation. The scope should be presented in a clear statement to all parties involved in the evaluation and typically includes

the purpose of the evaluation, which may discuss the background of and reasons for the review;

areas to be evaluated and any special concerns;

specific enumerated activities (optional);

funding or other forms of support available for the review activities;

form of the results (typically a written report, but may include oral discussions or presentations);

due date for the results; and

evaluation team composition (if more than one evaluator).

Figures 11-13 contain sample language for key elements of three types of charge letters involving external evaluators. (Figures 11-13 are included on pages 3905:40-42.)

The evaluator(s) often will further clarify their responsibilities as outlined in a charge letter by

establishing the parameters for the evaluation,

identifying concerns or sensitive areas that may not have been specified in the written charge letter,

outlining the full range of evaluation activities that may be involved and may be conducted by other groups,

determining lines of communication, and

ascertaining primary stakeholders and potential users of the evaluation results.

Organizing for and Conducting the Evaluation

If the impetus for the external evaluation comes from outside the OSP, the office leadership may not be involved in organizing many of the details. However the OSP leadership should be aware of the general factors that go into the evaluation process, including the following:

Communications: The time line for the evaluation should contain multiple opportunities for communications between the evaluator, or chair of the evaluation team, and the initiator. Frequency of communications should be determined at the outset.

Evaluation structure: The time line should detail tasks that map the scope of the evaluation to the functions covered in the review and ultimately to the specific
Assessing the Sponsored Research Office

information sources pertaining to each.

◆ **Background Information:** Evaluators should be provided basic knowledge about the institution, various office relationships, the OSP operations and staff, and users of office services. The evaluators assess existing and collect new information from a variety of sources, usually documents and interviews. The relevancy for all data collected is defined by the scope of the evaluation. Results from any previous self-studies should be given to external evaluators, as they could provide a frame of reference by presenting a summary of the operation, self-identified strengths and weaknesses, and an orientation to the broader institution. The evaluator could then use this information in formulating evaluation activities and questions.

Determining the types and range of information sources necessary is critical to eliciting complete and unbiased data from which the evaluation results are compiled. Each evaluation will necessarily select information sources based on the scope of the evaluation, matching the focus of the evaluation and the time and cost parameters for the process. Figure 15 lays out various information sources that evaluators could use in the course of their review. (Figure 15 is included on pages 3905:46-47.)

◆ **Data collection:** The type and form for data collection may be influenced by the time available and staff or dollar support. Surveys and multiple site visits may extend the time frame. Specific sources for data and background information should be identified for interviews and interview questions should be listed.

◆ **Site visit:** Generally one site visit is scheduled and used to collect information from various stakeholders through individual or small group meetings. The initiator of the evaluation generally will determine the focus and breadth of the site visit, which should flow from the areas to be evaluated. Stakeholder meetings during a site visit typically include members from appropriate groups, such as the reporting unit, sponsored program office staff and/or director, faculty users, or related offices. The use of multiple evaluators allows for greater coverage of meetings and locations. Figure 14 contains sample itineraries for site visits. (Figure 14 is included on pages 3905:43-45.)

◆ **Data analysis:** The time necessary for data analysis by the evaluator is influenced by the type and form of data collection. If data has already been collected, then only time for analysis is needed; if the evaluator is collecting data, then additional time will be needed. If more than one evaluator is involved in the project, additional time often is structured for discussion and resolution of differing perspectives.

◆ **Report writing:** The time line for report writing must be set down. If there are multiple evaluators, more time than for a single evaluator may be needed to produce a report.

◆ **Draft report:** The report should be presented first in draft form. Sufficient time should be established for review by the initiating office and other appropriate parties.
◆ Final report: The evaluator should consider all comments made on the draft report and incorporate or revise it as appropriate. Inaccuracies should be corrected, but other comments received may or may not be incorporated at the discretion of the evaluator.

Evaluation Results
Evaluators will typically provide a written report and the OSP should be given the opportunity to review a draft. One goal of the assessment is to produce a fair and accurate picture. Therefore the sponsored programs office, the institution, and those involved in the assessment should equally share in this goal. In reviewing the report, the research administrator should not refute conclusions or recommendations, but only identify errors. Research administrators should note, however, that corrections indicated to the written report do not necessarily have to be accepted by the evaluator or evaluators. The draft review also provides an opportunity for the administrator to comment on the clarity of the document.

After the evaluators have considered any comments, a final report will be submitted. Although not always a part of the evaluation process, a discussion with the evaluators after the final report has been submitted can provide an opportunity for the OSP to explore specific findings and conclusions or recommendations that have been put forward.

13905.10 Using Quality Improvement Programs for Assessment
A quality improvement program is used to create systemic change. Quality improvement programs look at assessment from a broad view and examine the institutionwide research environment, the needs of various stakeholders, and the systems used in that environment. The program facilitates the evolution of research administration systems that are successful and innovative in supporting and improving the research environment.

This approach brings a paradigm shift in the way one traditionally thinks about assessment and associated management practices. The quality improvement program blurs the lines between an assessment as one separate activity that leads to another separate activity and a process of management decision making. The quality improvement program incorporates into one model: system development, management improvements, and ongoing feedback from all stakeholders. A quality improvement program can be developed for a particular aspect of research administration (such as the proposal-processing system) or it can apply to the institution’s entire research enterprise.

Many institutions likely will discover that they have elements of a quality improvement program already in place. Some task forces or networking groups composed of central and department research administrators that provide ongoing feedback to OSPs often act as “mechanisms” for quality improvement. Similarly some offices have advisory committees that provide advice on user needs and direction for the operation. See Figure 16 for a sample document outlining one institution’s “proactive” approach to compliance. (Figure 16 is included on page 3905:48.)
Responding to Assessment Results

A sponsored programs office should critically and thoughtfully consider the information resulting from any assessment activity, and prepare a detailed, usually written, response regardless of the type of activity. There are many ways assessment results can be used, other than to address the initial reason for the assessment. In providing a written response, an OSP goes “on record” with its response in the event of changes in the research environment or decision makers. It is therefore important for the OSP to provide a detailed, written response, especially if it takes issue with some conclusions or recommendations.

Typically for those assessments that are directed from within the office, such as focus groups, self-audits, and self-studies, the OSP leadership would receive the results. Additionally OSP staff, advisory groups, or the reporting unit may be provided the results. In the case of broader and more visible activities, such as external evaluations or quality improvement programs, the relevant stakeholders (including the OSP, reporting unit, and user groups) should receive at least summaries of results, if not the complete results. Depending on the institutional structure, some or all of the results might be shared with the faculty community at large.

The response to the final report of results can be accorded the same level of formality as the format of the assessment results. If the results were shared during a verbal interface, the response could be presented verbally, but nonetheless still documented in writing and kept on file. Use the response as an opportunity to present differing views, support recommendations, or react to legitimate problems raised. The response should

◆ document areas of disagreement,
◆ provide missing or supplemental information,
◆ present different interpretations, and
◆ offer a rationale for additional recommendations.

Results of the assessment should be reviewed objectively. If the assessment appears to have been conducted fairly, the conclusions and how they translate to areas for change should be evaluated critically. While there may be good reasons for not embracing every recommendation in the final report, each one should at a minimum be considered in light of its impact on both the OSP and the institutional environment. The OSP response to an assessment recommendation made or conclusion drawn often is one of the following:

◆ It is not appropriate as it comes as a result of a process flaw (due to lack of critical information considered in the evaluative process).
◆ It deserves further consideration as a possible operational change.
◆ It presents a perspective or conclusion about which there is disagreement.
◆ There are resource implications for implementing.

If the results raise legitimate problem areas, deficiencies, or shortcomings, a clear response should be provided on what steps have or will be taken to correct the
problems. The tone of the response should be detached and written for a wide range of readers, even if the response is filed internally or directed to a particular decision maker.

**Developing the Assessment-Management Cycle**

Each assessment activity should lead to action that furthers one’s mission, demonstrates accountability, and leads to process improvement. Good management practices routinely turn “assessment” results into “management” decision making and actions. The assessment-management cycle therefore encompasses a regular sequence of activities in which one should

- Determine what the operation should look like given the constraints and opportunities within the institutional culture and research environment and recognizing that the field of research administration is constantly evolving. (Best practices, peer university models, and discussions with colleagues to identify other operational practices should be used.)
- Assess the existing OSP operation in light of what it could look like (based on the strengths and weaknesses identified through self-studies, focus groups, retreats, and advisory groups).
- Identify several areas for improvement that are reasonable in light of available resources and develop a plan for implementing changes to priority items and determining how the success of the changes will be measured (such as via retreats and advisory groups involving stakeholders). The plan should also
  - **define office goals** that relate to the institution and office mission (Goals are more specific aspects of the mission and often are three-five year targets.); and
  - **detail strategies and objectives to reach goals.** (Objectives are specific steps to achieve goals; they are often measurable and action oriented and change each year.)
- Implement ongoing assessments to review progress made in areas needing improvement. Adjust strategies as needed, based on unplanned opportunities and unplanned problems. “Anticipate” opportunities and problems and make planning for and adjusting to them a part of assessing the research environment at the institution and the OSP’s objectives. (Again ongoing assessment to monitor the impact of changes and to determine where adjustments still need to be made could include self-audits, retreats, focus groups, and advisory groups.)
- Periodically re-examine the operation based on changes made and re-assess what the operation “should” look like. (Again external evaluations and quality improvement programs allow one to incorporate various stakeholders in the assessment process and bring further insights on operational efficiencies and service.)

**Strategic Planning.** Many of the assessment activities described in this chapter use elements found in formal programs of institutional strategic planning. Although the forms of assessment are different from those described here when conducting strategic planning, the philosophy behind each approach is ultimately the same: to
scan the environment for threats and opportunities and use the assessment tool as feedback for operational decision making. Figure 17 contains elements for an effective strategic plan. (Figure 17 is included on page 3905:48.)

§3905.12 Conclusion

Today more than ever before, the research enterprise is a complicated, far-reaching, and ever-changing process. Further in recent years, university sponsored research activities have become the focus of increased attention from external parties. OSPs are always looking for ways to improve staff performance and their operations.

Assessment activities — both those that are “one shot” in nature and those that are part of an ongoing program — are conducted by OSPs to evaluate existing processes, determine where operations are running smoothly, and identify where improvements are needed. Further in examining each function of an OSP, one can easily identify areas for garnering feedback on threats or opportunities to which the office should respond.

Assessment also is conducted at the institutional level to identify a newly emerging mission at the university and consider the opportunities for the OSP to support that new interest. Assessment of the OSP enterprise also is done at the national level, such as through communications and national meetings with colleagues and information received on evolving federal issues, which can be translated into action issues for the office.

In 1978 Raymond J. Woodrow spoke about the differences between “management for research, not of research.”5 He described the attributes of programs that provide support for research as those that have a “nourishing climate, sound policies, supporting services of various kinds, financial systems, and organizational arrangements that will help research to flourish in a university.” Assessment activities of an office of sponsored programs (OSP) are part of the philosophy of management for research and reflect how OSP operations need to be responsive to best support an institution’s research enterprise, while at the same time help the OSP maintain a compliant and fiscally sound operation.

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At Harvard University, the Office of Sponsored Programs (OSP) has been reorganized a number of times. The reorganization has been done in concert with faculty focus groups and the administration. Focus groups are composed of faculty, local school and department administrators, and OSP personnel. The groups are contacted twice yearly in order to gather feedback on the operation. Prior to meeting, the focus groups receive a feedback form identifying the general topics of discussion (see below). When the groups meet, there is an opportunity for candid discussion on the general areas.

“It isn’t always easy to hear feedback,” according to Elizabeth Mora, Associate Vice President for Research Administration. When feedback is received through this process it is fed back into the model and used for assessing operational effectiveness and decision making.

Questions Regarding Research Policy and Administration

Given that there are many changes of personnel and systems at the Office for Sponsored Programs and in central FAS (Faculty of Arts and Sciences) Administration, it seems like a good opportunity to examine the service we, the joint OSP/FAS Research Administration team, are providing to you and the principal investigators with whom you work. As part of this process, we will be meeting with focus groups in each of the divisions, which will include faculty and administrators. Our goal is to analyze the feedback from these focus groups and incorporate the knowledge gained into a better, more smoothly integrated system for managing research in the FAS.

In preparation for our meeting on Friday, please consider the following questions:

1. Please name the biggest challenges you face as lab directors with respect to research administration? With respect to research policy? What are the biggest challenges faced by your principal investigators from research administration and policy?

2. If you were placed in charge of OSP, what would be your top priority for improving research policy or administration? What about if you were in charge of FAS Research Administration?

3. What kind of resources are needed in your department/center/area spotting grant opportunities and writing and submitting grants?

4. Are the written communications you (or others with whom you work on grants) receive regarding research policy and administration adequate and clear? For example, how helpful do you find Managing Your Research: A Handbook for Principal Investigators, Research Administrators, and Research Staff and the Grey Book (Principles and Policies that Govern your Research, Instruction, and other Professional Activities)?

5. What are we (meaning the OSP/FAS joint effort to administer the life cycle of a grant) doing right? What person, process, or office has been particularly helpful to you?

If you are unable to attend Friday’s focus group or would prefer to provide written comments, please feel free to email XXX.

Source: Harvard University, Elizabeth Mora, Associate Vice President for Research Administration.
Figure 3: Sample Survey Questions for Faculty

Surveys of faculty are generally the first type of survey considered in conducting an evaluation of an OSP’s operations. The following sample questions reflect a range of subject areas and types of questions and formats for questions that could be part of a faculty survey.

Sample Question for Topic Area: Internal Support Programs
1. Besides sponsored research, please list other scholarly achievements during FYs XX that have resulted, either in whole or in part, from your Division of Sponsored Research internal support — major paper presentations, publications, exhibits, awards, fellowships, appointments, etc.

Sample Question for Topic Area: Grants Information
1. Grants Information. The Office of Research Services disseminates information about grants programs through individual mailings and a newsletter. Searches for support for faculty projects are conducted on request. The office also conducts workshops and information programs dealing with the techniques of grantsmanship.
   A. How important are these services to your own research activity? (Circle the most appropriate response.)

<table>
<thead>
<tr>
<th>Extremely Important</th>
<th>Very Important</th>
<th>Somewhat Important</th>
<th>A Little Important</th>
<th>Not at all Important</th>
</tr>
</thead>
</table>

Sample Question for Topic Area: Faculty Interests
1. How likely would you be to use the following if available electronically through the (computer system)?

<table>
<thead>
<tr>
<th>Very Likely</th>
<th>Not at all Likely</th>
<th>Don’t Know</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Faculty Research Interest Database</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

(sample compilation of faculty research interests)

Sample Question for Topic Area: Incentives
1. Below is a list of some things that might encourage you to seek support for research or creative work. Which of these incentives are available to you?

Incentives: Yes No
a. More work space or laboratory space/equipment
b. Prospect of promotion/tenure
c. Summer pay
d. Release time
**Sample Question for Topic Area:** Perception of Research Within the University

1. Indicate how highly you believe research is valued at various levels in the university by circling the appropriate response on a scale from 1 to 5. (NA = not applicable; 1 = not valued, 5 = highly valued)

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. University administrators</td>
<td>NA 1 2 3 4 5</td>
<td></td>
</tr>
<tr>
<td>B. Dean</td>
<td>NA 1 2 3 4 5</td>
<td></td>
</tr>
</tbody>
</table>

**Sample Question for Topic Area:** Department/College Services

1. Typing and clerical support for research papers/proposals

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is service provided?</td>
<td>Yes □ No □</td>
</tr>
<tr>
<td>B. If yes, how well is it provided?</td>
<td>Not very well □  Moderately well □  Very well □</td>
</tr>
<tr>
<td>C. If no, should it be provided?</td>
<td>Yes □ No □</td>
</tr>
</tbody>
</table>

**Sample Question for Topic Area:** Other University Support Services

Below are listed a variety of support services that the university provides. Indicate how helpful or adequate you believe each is to you by circling the appropriate response on a scale from 1 to 5. (U = unknown/don’t know the service well enough to evaluate it; 1 = not helpful; 5 = very helpful)

1. Procurement and Purchasing

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Processing purchase orders</td>
<td>U 1 2 3 4 5</td>
</tr>
<tr>
<td>B. Assistance with purchasing equipment for research</td>
<td>U 1 2 3 4 5</td>
</tr>
<tr>
<td>C. Assistance with state bid process</td>
<td>U 1 2 3 4 5</td>
</tr>
<tr>
<td>D. Supplying information about procurement and purchasing</td>
<td>U 1 2 3 4 5</td>
</tr>
</tbody>
</table>

**Sample Question for Topic Area:** Equipment, Facilities, and Resources

Below are listed a variety of resources that may be necessary in conducting research. Indicate the adequacy of each by circling the appropriate response on a scale from 1 to 5. (NA = not applicable; 1 = very inadequate; 5 = very adequate)

1. Statistical Laboratory, Department of Statistics

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
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<tbody>
<tr>
<td>(for consultation on experimental design and data analysis.)</td>
<td>NA 1 2 3 4 5</td>
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</table>

continued
**Sample Question for Topic Area:** Facilities & Administrative (F&A) Costs

Indicate your level of agreement with the following statements about F&A costs by circling the appropriate response on a scale from 1 to 5. (U = unknown; 1 = strongly disagree; 5 = strongly agree)

1. I support the way funds generated from F&A costs are handled in my college  U   1   2   3   4   5

**Sample Question for Topic Area:** Assessment of Services

For Questions 1-94, use the following scale:
(1) Strongly Disagree  (2) Disagree  (3) No Opinion  (4) Agree  (5) Strongly Agree

1. The Office of Grants Accounting serves the research community very well in the following areas:
   A. Handling of purchase requests and purchase orders
   B. Accounting reports to principal investigators (monthly and annually)
   C. Handling of refunds, returns, and credits
   D. Rebudgeting
   E. Timeliness of year-end balance information
   F. Help with grant spend outs

**Sample Question for Topic Area:** Post-Award Services

1. Post-Award Services. Examples of Research Services’ post-award services include the writing of contracts and subcontracts on behalf of the university and authority (shared with Finance) over budget transfer within grants.
   A. Please describe your degree of satisfaction with each of the following aspects of these services.
      (Circle the most appropriate response)

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<thead>
<tr>
<th></th>
<th>Very Satisfied</th>
<th>Somewhat Satisfied</th>
<th>Neither Satisfied nor Dissatisfied</th>
<th>Somewhat Dissatisfied</th>
<th>Very Dissatisfied</th>
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<tr>
<td>Budget negotiations</td>
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<tr>
<td>Contract and subcontract preparation</td>
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<tr>
<td>Intragrant fund transfers</td>
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Figure 3 (continued)

Sample Question for Topic Area: Compliance
As you may know, there are several committees that regulate the conduct of research to protect research subjects, animals, the environment, and society. Much of their activity is necessary in order to comply with federal, state, and sponsor regulations. There are committees of faculty, staffed by personnel from the Office of the Vice President for Research. We are interested in your experiences both with the committees and with their staff.

1. Radiation Protection Committee:
   A. Have you ever had any contact with or dealt with the Radiation Protection Committee?
      ☐ Yes, within the past 3 years
      ☐ Yes, more than 3 years ago
      ☐ No (Skip to Q 7)
      ☐ Don’t know (Skip to Q 7)
   B. How efficient and effective was the committee in meeting your needs?
      ☐ Very effective
      ☐ Effective
      ☐ Not very effective
      ☐ Not effective at all
      ☐ Don’t know

Sample Question for Topic Area: Policies and Procedures
There are various policies and procedures established to guide research and sponsored projects. In order for these policies to be effective, they must be understandable, helpful, consistent, available to you, and reasonably flexible.

1. Do you have reasonable access to the University Policies and Procedures manuals, particularly those sections covering areas such as “Research & Sponsored Programs” and “Purchasing” that detail the rules for managing your sponsored accounts?
   ☐ Yes ☐ Not sure ☐ No

2. Sponsors may have a variety of policies and guidelines concerning expenditures and reporting requirements. When you have questions about these policies, which sources do you use to find the answers? (Check as many as apply)
   ☐ Office of Sponsored Programs Administration
   ☐ Research and sponsored programs manual
   ☐ The sponsor
   ☐ College research dean or department chairperson
   ☐ Other (Who or where?) _____________________________
   ☐ Have not had questions

Source: Permission was granted by the following institutions for use of these instruments: Arizona State University; Colorado State University; Florida State University; Illinois State University; Indiana University; Loyola University of Chicago; Medical University of South Carolina; Northwestern University; Pennsylvania State University; The Research Foundation of the State University of New York; University of Florida; University of Illinois at Urbana-Champaign; University of Missouri-Columbia; and University of South Carolina.
**Figure 4: Sample Survey Questions for Department Heads**

Collecting information from department heads provides valuable insight into the overall direction for the OSP and services needed by departmental administration. The following sample questions reflect a range of subject areas and types of questions and formats for questions that could be part of a department head survey of an OSP’s operations.

**Sample Question for Topic Area: Identification of Services Provided**
1. Please review the following lists of pre-award and post-award services for external support development and grant and contract administration and put a check in the space provided for all services which your unit provides.
   [lists not provided in sample]

**Sample Question for Topic Area: Distribution of Facilities & Administrative (F&A) Costs**
A percentage of the funds generated from the Facilities & Administrative (F&A) costs (“overhead”) charged to external grants is returned as research incentive funds to the departments and centers that generated those funds. This year that percentage has increased to 40%.
(SD = Strongly Disagree; D = Disagree; N = Neither Agree Nor Disagree; A = Agree; SA = Strongly Agree)
1. It should be possible to financially reward principal investigators, during the time they are directing grants, for bringing external funds to the university.

**Sample Question for Topic Area: Distribution of Research Funds to Graduate Students**
Funds are available to provide limited support to graduate students to present papers at professional meetings.
(SD = Strongly Disagree; D = Disagree; N = Neither Agree Nor Disagree; A = Agree; SA = Strongly Agree)
1. An effort should be made to provide summer research support for graduate students with 9-month teaching appointments

**Sample Question for Topic Area: Other Priorities and Responsibilities of the Research Office**
The management policies/priorities of the Graduate School/Research Office should:
(SD = Strongly Disagree; D = Disagree; N = Neither Agree Nor Disagree; A = Agree; SA = Strongly Agree)
1. Take an active role in promoting reduced teaching loads for faculty who are successfully engaged in research activities.
Sample Question for Topic Area: Other Activities
(SD = Strongly Disagree; D = Disagree; N = Neither Agree Nor Disagree; A = Agree; SA = Strongly Agree)

1. The number of faculty research fellowships should be increased even if it means less money per stipend.

Source: Permission was granted by the following institutions for use of these instruments: Arizona State University; Colorado State University; Florida State University; Illinois State University; Indiana University; Loyola University of Chicago; Medical University of South Carolina; Northwestern University; Pennsylvania State University; The Research Foundation of the State University of New York; University of Florida; University of Illinois at Urbana-Champaign; University of Missouri-Columbia; and University of South Carolina.
**Figure 5: Sample Survey Questions for Sponsored Programs Staff**

An important aspect of assessing an OSP’s operations is to solicit feedback from staff. The following sample questions reflect a range of subject areas and types of questions and formats for questions that could be part of a staff evaluation of an OSP’s operations.

**Sample Question for Topic Area:** Job Satisfaction

Below are some questions about factors that may contribute to morale in the workplace. These include things like job satisfaction, pay, and relationships with coworkers and supervisors.

1. Doing my job well is important to the Office of the Vice President for Research.
   - □ Strongly agree
   - □ Agree
   - □ Neither agree nor disagree
   - □ Disagree
   - □ Strongly disagree
   - □ Don’t know

**Sample Question for Topic Area:** Mission of the Office

1. How well do you understand the overall mission of the Office of the Vice President for Research?
   - □ Very well
   - □ Well
   - □ Not very well
   - □ Not well at all
   - □ Don’t know

**Sample Question for Topic Area:** Pay

1. Generally, how do you think your pay compares with the pay of others who hold similar jobs at this institution?
   - □ I am paid more than others
   - □ I am paid about the same as others
   - □ I am paid less than others
   - □ Don’t know
**Figure 5 (continued)**

**Sample Question for Topic Area:** Relationships with Coworkers and Supervisors

1. How well do you think your supervisor keeps you informed about the things you need to know to do your job?
   - □ Very well
   - □ Well
   - □ Not very well
   - □ Not well at all
   - □ Don’t know

**Sample Question for Topic Area:** Training Programs

1. How useful was the “on-the-job-training” you received?
   - □ Very useful
   - □ Somewhat useful
   - □ Not very useful
   - □ Not useful at all
   
   If the training *wasn’t useful*, why wasn’t it?

   __________________________________________________________________________
   __________________________________________________________________________

**Sample Question for Topic Area:** Information about Respondent

Remember that all information provided is strictly confidential. The data will never be used in any way that would allow you to be identified.

1. How long have you worked in your current job at the Office of the Vice President for Research?
   - □ Less than 1 year
   - □ 1 year to 2 years
   - □ 3 years to 4 years
   - □ 5 years to 6 years
   - □ 7 years to 10 years
   - □ 11 years or more

continued
**Sample Question for Topic Area:** Factors Influencing Job Performance

The next two questions are about things that may either help or hinder you in doing your job well. We have provided a list of items for you to consider, along with some examples. They include:

- **Effective communication with your unit:** Meetings (number, effectiveness, scheduling); response to requests for information; support from coworkers and supervisors
- **Effective communication with other Office of the Vice President for Research (OVPR) units:** Meetings among units in OVPR; timely responses to requests for information; and dissemination of information
- **Your work environment:** Including such things as cleanliness, safety, noise, odors, lighting, and comfort.
- **Support from coworkers:** Includes answers to problems, advice, and scheduling (flex-time).

1. There are many things that may influence job performance. We are interested in finding out what you think are the major factors that assist you in doing your job well.

   Please identify and rank (1, 2, & 3 with “1” being the most helpful) the three factors within the Office of the Vice President for Research that help you the most in completing your job: (within each category, space has been provided for comments)

   - ☐ Effective communication with other units at (institution) outside of the Office of the Vice President for Research
     
     __________________________
     __________________________

   - ☐ Your work environment
     
     __________________________
     __________________________

   - ☐ Support from coworkers
     
     __________________________
     __________________________

**Sample Question for Topic Area:** Contact and Satisfaction with Related Offices

1. How often do you have contact with each of the following groups as a part of your job? (Check one box in each row)

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<tr>
<th></th>
<th>Frequently</th>
<th>Sometimes</th>
<th>Seldom</th>
<th>Never</th>
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<tbody>
<tr>
<td>Sponsored Programs Administration</td>
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<tr>
<td>Animal Care Office</td>
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</table>
Sample Question for Topic Area: Information Flow
1. How effective is the information dissemination by your unit to those outside the Office of the Vice President for Research? Would you say it is:
   - [ ] Very effective
   - [ ] Somewhat effective
   - [ ] Not very effective
   - [ ] Not effective at all
   - [ ] Don’t disseminate information outside OVPR
   If not, why?

Sample Question for Topic Area: Overall Strengths and Weaknesses of the Office
1. What do you see as the biggest weakness of the Office of the Vice President for Research?

Source: Permission was granted by the following institutions for use of these instruments: Arizona State University; Colorado State University; Florida State University; Illinois State University; Indiana University; Loyola University of Chicago; Medical University of South Carolina; Northwestern University; Pennsylvania State University; The Research Foundation of the State University of New York; University of Florida; University of Illinois at Urbana-Champaign; University of Missouri-Columbia; and University of South Carolina.
Figure 6: Tracking Staff Activity

The following form is used at Oregon State University to gather a representative sampling of staff data collected over a two-week period.

Name: ____________________________  Date: ____________________________

<table>
<thead>
<tr>
<th>Time</th>
<th>Records Management</th>
<th>Proposal/Protocol Review</th>
<th>Inquiries</th>
<th>Current Issues/Policy Development/Training</th>
<th>Policy/Informational Reading</th>
<th>Meeting Management</th>
<th>Meetings Attended</th>
<th>Supervision</th>
<th>Workshops/Events</th>
<th>Leave/Break</th>
<th>Personnel</th>
<th>Budget</th>
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**Records Management** — Time spent keeping all records up to date, adding new information when needed and eliminating all old records when out of date. Includes time spent on filing, database management or training, information distribution, copying, mailing, recycling, and sorting.

**Proposal/Protocol Review** — Time spent actually processing or reviewing a proposal or protocol. Includes time spent on follow-up phone calls, emails, and any other type of communication required for processing.
At the University of Washington, a system has been developed to track individual staff activity. Staff maintain spreadsheets of their activity, including such items as proposals/awards assigned, completed, and pending. Data also is generated for days in the office (average, median, and longest/shortest number of days). Each month the data is collected and graphs are developed that reflect the activity. Results are reviewed by the management and form the basis of work allocation, staff educational needs and process improvement. The aggregated data is analyzed to provide information on possible workload trends. Currently this information is primarily collected manually, but in the future this information will be part of the automated grants system.

“In large operations, it is sometimes difficult for managers to get a clear picture of what is really happening,” according to Carol Zuiches, Assistant Vice Provost for Research. The performance metrics were developed for use as a office management tool, but also serve as data for university assessments of resource needs and allocation decisions.

Source: University of Washington, Carol Zuiches, Assistant Vice Provost for Research.
Managing Externally Funded Research Programs: A Guide to Effective Management Practices, published by the Council on Governmental Relations (COGR), defines twelve core principles of a management system. Within each principle is a set of practices supported by detailed indicators. As defined in the publication, indicators “are suggested measures to use when examining whether the effective practices are being employed or outcomes are being achieved.” One way to use the guide is to create a matrix composed of the details of one’s practices and indicators that support each principle. The matrix might include details such as responsible persons, their responsibilities, and descriptions of programs or authorities. The matrix then could be used as a tool to look at the practices at an institution and determine whether they reflect the indicators that suggest a solid program.

As an example, the first principle is “Institutional Program for Effective Compliance Practices.” This principle addresses the type of system that has been implemented by the institution to address compliance with federal, state, and local laws. Within that global principle, there are a number of practices that address such areas as policies, lines of responsibility, understanding by the leadership, education, noncompliance, and risk assessment. Each of these practices lists a number of indicators that identify whether an institution has the components to the system in place that would indicate effective compliance. An example of one practice and indicators is provided and illustrates how the COGR publication can be used for purposes of conducting self-audits.

**Figure 8: Framework for a Self-Audit Program**

| Principle I: Institutional Program for Effective Compliance Practices |
| Practice C. The institutional leadership is knowledgeable and supportive of an effective compliance program. |

<table>
<thead>
<tr>
<th>Indicator 1. The institution has a senior-level administrative process to ensure sponsored programs compliance.</th>
<th>In Place? Yes/No</th>
<th>Who?</th>
<th>Where/How?</th>
<th>Corrective Actions?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 2. The institution provides adequate resources and assigns appropriate authority to carry out such compliance program-related responsibilities and reports periodically to senior-level personnel and, as appropriate, to the governing authority, or an appropriate subgroup of the governing authority.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicator 3. The institution’s governing authority is knowledgeable about the content and the operation of the compliance program and exercises reasonable oversight with respect to its implementation and effectiveness.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

continued
Figure 9: Staff Participation in a Self-Study

At Oregon State University, the self-study is used for team building. Office staff are assigned to two-person writing teams and tasked with writing several report sections. The staff are additionally assigned to three different review teams. Each team contains a different mix of staff and reviews different sections.

After the initial writing, the first round of review and critiques is done by the first round of review teams. After revisions, a second and third round of reviews and critiques are done.

Writing Teams:
◆ Team A1
◆ Team A2
◆ Team A3
◆ Team A4

Writing Assignments:
◆ Team A1
  ◆ Communications
  ◆ Operational Processes
  ◆ Policy
◆ Team A2
  ◆ Staff Development/Staffing
  ◆ Data/Records Management
  ◆ Metrics
◆ Team A3
  ◆ Key Partners
  ◆ Outreach/Education
  ◆ Introduction
◆ Team A4
  ◆ Overall Risk Assessment
  ◆ Management/Budget
  ◆ Strategic Planning Process

Review Team – Round 1:
◆ Team B1 reviews A1
◆ Team B2 reviews A2
◆ Team B3 reviews A3
◆ Team B4 reviews A4

Review Team – Round 2:
◆ Team C1 reviews A2
◆ Team C2 reviews A3
◆ Team C3 reviews A4
◆ Team C4 reviews A1

Review Team – Round 3:
◆ Team D1 reviews A3
◆ Team D2 reviews A4
◆ Team D3 reviews A1
◆ Team D4 reviews A2

“The process allows staff to work with each other throughout the process and provides ownership in the self-study. This approach also provides the opportunity for analytical skill building,” according to Peggy S. Lowry, Director, Office of Sponsored Programs and Research Compliance. Allowing staff to have a direct part in the process helps to build the accountability for the operation at the most basic and central staff level.
**Figure 10: Examples of Self-Study Data Collection**

**Questions about Educational/Training Offerings:** What are your core offerings? How were these determined? What delivery mechanisms are used? How do you know these are the best delivery mechanisms? Who is your target audience? How do you know you are reaching your target audience? How do you know you are meeting the needs of this target audience? How do you determine satisfaction or dissatisfaction with your educational offerings? How do you use the information to support your decision making and innovation? How do you identify changing needs of your audience? What are your challenges to sustaining your educational offerings?

**Educational/Training Metrics:** Number of attendees, attendees by faculty rank and/or department research administrators, overall attendees by department/discipline, attendee rating of training, attendee rating of training by department/discipline, and attendee rating over five-year period (requires a consistent rating form).

**Focus Group on Educational/Training Offerings:** Identify 8-10 faculty or department administrators who have attended your training. Explore the questions: How effective, or not, was the delivery mechanism used? What other delivery mechanisms would be more valuable and why? What other educational topics would you like to see covered? Why are those topics so important to you?

**Figure 11: Sample Language for Inclusion in a Charge Letter: External Evaluator**

In the interests of maintaining an effective, responsible administrative organization, I intend to periodically review the various special academic and administrative units within the purview of the (reporting office name). One of these units is the (office undergoing review), which operates under the direction of (office director name). (office name) has been under the aegis of the (reporting unit name) since ___. During that time it has developed substantially, and it has undertaken a variety of services in support of the efforts of our faculty to garner external research support and in general support of campus and central administrative research administration. I believe that the unit has now matured to an extent that a review of its functions and operations is warranted. I ask that you serve under the chairmanship of ____ in conducting the review of the unit.

I ask that in your review you pay particular attention to the following questions:

- What are the research services supplied by (office name)?
- To whom are these services provided?
- Are these services valued by their recipients? Are they uniquely supplied by (office name) or do they augment or duplicate services elsewhere?
- Does (office name) serve the needs of the campus generally, or are there specific areas of the campus that benefit more than others?
- Has the existence of (office name) had a demonstrable effect on the level and quality of externally sponsored research support for our faculty? (It may not be possible to answer this question unequivocally, but I would like to know your judgment in the matter.)
- I would like you to particularly examine (list specific service or activity), and provide me with an evaluation of their present and potential utility for the university.
Figure 11 (continued)

Is (office name) properly organized and situated? Would it be possible to save significant monies by downsizing or other reorganization, without materially impairing the availability of valued services? What negative impact would any such changes have, particularly in certain areas, or on particular segments of the campus community?

What level of services such as those provided by (office name) are available at peer institutions?

Are there services not now provided by (office name) that should be added to its portfolio? If so, at what added levels of expenditures should these services be added?

I would like to suggest that you consider the possibility of conducting a little survey of the faculty to determine the extent to which they are aware of (office name), make use of, and value the services it provides. This might be done by means of a telephone survey in which 10 percent of the faculty, chosen at random from the telephone directory are called and asked a series of simple questions regarding (office name). A second survey might be taken of the departmental business managers or department heads, regarding their perceptions of (office name). Finally, you might consider a survey of identified users of the (office name) services. I would be happy to furnish funds for the employment of an hourly employee (graduate student or advanced undergraduate) to conduct such telephone surveys should you think them desirable.

I thank you in advance for your willingness to undertake this activity. I hope that it will be possible for you to report on the results of your work before the end of the (date) semester.

cc: Director of office undergoing review

Figure 12: Sample Language for Inclusion in a Charge Letter: Pre-Award Research Office Evaluation

Duties of contractor:

1. Contractor agrees to provide the following professional services to (institution):

   A. Conduct a thorough evaluation of the (office name), to include but not be limited to:
      (1) Review the program and library holdings and electronic access to information and assess them and their management systems regarding completeness, currency, and necessity.
      (2) Review the process for disseminating materials for prospective funding to the faculty. Assess efficiency, cost effectiveness, and scope, and suggest improvements or future directions.
      (3) Review the services provided by (office name) and evaluate their applicability and effectiveness and suggest improvements or future directions.

   B. Provide a report commenting on the items included in “A.” above, listing possible alternatives or improvement and providing an overall assessment of (office name) activity.

2. Contractor agrees to provide said onsite services during the period (dates). The report is to be submitted to (institution) no later than (date).
Figure 13: Sample Language for Inclusion in a Charge Letter: Multicampus Research Office Evaluation

The Goals of the Evaluation of (office name)

The goals of the planned evaluation relate to the (office name), a centralized, universitywide organization that supplies certain administrative support to researchers. Although it is clear that no office can be looked at completely apart from its context, this particular effort is aimed at improving the work of (office name). The evaluation group will likely want to have a look at some of the other administrative units and will wish to examine the university’s general posture concerning research and sponsored projects, but we hope that the evaluators will keep (office name) at the center of their concerns.

It is the goal of (office name), relying in part upon the evaluation, to improve the services offered to the university community. This may involve the addition of services not now offered, the ending of some activities, the re-assignment of responsibilities either within (office name) or among the several service units at (institution), and/or the reorganization of the office.

Charge to External Evaluators

The evaluators are asked to review the (office name) organization at (institution), and to prepare a written report, with recommendations, on aspects of the unit’s work.

The evaluators will:

Participate in preparation of the review, by providing suggestions on the evaluation’s goals, scope, and process.

Read the material submitted to them (list attached). Make suggestions about additional material.

Visit the campuses of (institution) as a team, for a two- or three-day period, on (date).

Complete the first draft by (date).

Complete a final draft within thirty days of receipt of response by (institution).
## Figure 14: Sample Site Visit Itineraries

### SAMPLE 2 DAY ITINERARY

#### Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 9:30</td>
<td><strong>Entrance Meeting</strong>: Provost and Vice President for Academic Affairs</td>
</tr>
<tr>
<td>9:45 – 10:00</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>10:00 – 10:45</td>
<td>Interim Director of Sponsored Programs</td>
</tr>
<tr>
<td>10:45 – 11:00</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>11:15 – 12:00</td>
<td>Faculty</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td><strong>Working Lunch</strong></td>
</tr>
<tr>
<td>1:00 – 1:45</td>
<td>OSP Staff</td>
</tr>
<tr>
<td>1:45 – 2:15</td>
<td>University President</td>
</tr>
<tr>
<td>2:15 – 3:15</td>
<td>Compliance (University Compliance Office, IRB Chair, IACUC Chair)</td>
</tr>
<tr>
<td>3:30 – 4:30</td>
<td>OSP Support Staff</td>
</tr>
<tr>
<td>4:30 – 5:00</td>
<td>Internal Auditor</td>
</tr>
</tbody>
</table>

#### Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 8:45</td>
<td>Grants and Contracts Accounting</td>
</tr>
<tr>
<td>8:45 – 9:00</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>9:00 – 9:45</td>
<td>Compliance (EH&amp;S, Biosafety, Lab Safety, Chemical Safety)</td>
</tr>
<tr>
<td>9:45 – 10:00</td>
<td>Research Foundation President</td>
</tr>
<tr>
<td>10:00 – 10:30</td>
<td>University Legal Counsel</td>
</tr>
<tr>
<td>10:30 – 10:45</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>10:45 – 11:45</td>
<td>Academic Deans</td>
</tr>
<tr>
<td>11:45 – 12:00</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>12:00 – 1:30</td>
<td><strong>Working Lunch</strong>, College grant support staff</td>
</tr>
<tr>
<td>1:30 – 3:30</td>
<td><strong>Executive Session</strong></td>
</tr>
<tr>
<td>3:30 – 5:00</td>
<td><strong>Exit Interview</strong>: Vice President for Research</td>
</tr>
</tbody>
</table>

*continued*
**Figure 14: Sample Site Visit Itineraries** (continued)

**SAMPLE 3 DAY ITINERARY**

### Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 8:45</td>
<td><strong>Entrance Meeting:</strong> Vice President for Research (or other top research stakeholder)</td>
</tr>
<tr>
<td>8:45 – 9:30</td>
<td>Senior Associate Vice President for Research</td>
</tr>
<tr>
<td>9:30 – 9:45</td>
<td>Open</td>
</tr>
<tr>
<td>9:45 – 10:45</td>
<td>Director/Manager, Research Information Services/Proposal Development Services</td>
</tr>
<tr>
<td>10:45 – 11:00</td>
<td>Open</td>
</tr>
<tr>
<td>11:00 – 12:00</td>
<td>Director/Manager, Sponsored Programs, Pre-Award</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>Working Lunch</td>
</tr>
<tr>
<td>1:00 – 2:00</td>
<td>Staff, Sponsored Programs, Pre-Award</td>
</tr>
<tr>
<td>2:00 – 2:15</td>
<td>Open</td>
</tr>
<tr>
<td>2:15 – 3:00</td>
<td>Deans/Associate Deans/Directors Research Centers and Institutes</td>
</tr>
<tr>
<td>3:00 – 3:15</td>
<td>Open</td>
</tr>
<tr>
<td>3:15 – 4:00</td>
<td>Director, Office of Research Integrity (Research Compliance)</td>
</tr>
<tr>
<td>4:00 – 5:00</td>
<td>Biosafety, EH&amp;S, Chemical Safety, Laser Safety, Radiation Safety</td>
</tr>
</tbody>
</table>

### Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 8:45</td>
<td>Vice President, Finance/Controller <em>(or other top finance stakeholder)</em> Associate Controller</td>
</tr>
<tr>
<td>8:45 – 9:00</td>
<td>Open</td>
</tr>
<tr>
<td>9:00 – 10:00</td>
<td>Faculty Group <em>(may be focused to a particular college)</em></td>
</tr>
<tr>
<td>10:00 – 10:15</td>
<td>Open</td>
</tr>
<tr>
<td>10:15 – 11:15</td>
<td>Director/Manager, Sponsored Programs Post-Award/Accounting</td>
</tr>
<tr>
<td>11:15 – 11:30</td>
<td>Open</td>
</tr>
<tr>
<td>11:30 – 12:00</td>
<td>General Counsel</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td>Working Lunch</td>
</tr>
<tr>
<td>1:00 – 2:00</td>
<td>Staff, Sponsored Programs Post-Award/Accounting</td>
</tr>
<tr>
<td>2:00 – 3:00</td>
<td><strong>Unit/Departmental Research Administrators</strong></td>
</tr>
<tr>
<td>3:00 – 3:15</td>
<td>Open</td>
</tr>
<tr>
<td>3:15 – 4:15</td>
<td>IRB, IACUC, Conflict of Interest Administrative Staff</td>
</tr>
<tr>
<td>4:15 – 4:30</td>
<td>Open</td>
</tr>
<tr>
<td>4:30 – 5:15</td>
<td>Junior Faculty</td>
</tr>
</tbody>
</table>

continued
### Figure 14: Sample Site Visit Itineraries (continued)

**Day 3**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:30 – 9:00</td>
<td>Internal Audit</td>
</tr>
<tr>
<td>9:00 – 9:30</td>
<td>Director/President, Development (Foundation)</td>
</tr>
<tr>
<td>9:30 – 9:45</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>9:45 – 10:45</td>
<td>Committee Chairs; IRB, IACUC, Conflict of Interest, Chemical/Other Safety Oversight</td>
</tr>
<tr>
<td>10:45 – 11:00</td>
<td><em>Open</em></td>
</tr>
<tr>
<td>11:00 – 12:00</td>
<td>Faculty Group (may be focused to a particular college)</td>
</tr>
<tr>
<td>12:00 – 1:00</td>
<td><strong>Working Lunch</strong></td>
</tr>
<tr>
<td>1:00 – 3:00</td>
<td>Call back and final Exit Meeting preparation</td>
</tr>
<tr>
<td>3:00 – 4:30</td>
<td><strong>Exit Meeting</strong></td>
</tr>
<tr>
<td></td>
<td>Vice President for Research</td>
</tr>
<tr>
<td></td>
<td>Vice President for Finance</td>
</tr>
<tr>
<td></td>
<td>Provost/President</td>
</tr>
</tbody>
</table>
## Figure 15: Information Sources for Evaluators

This table lays out various information sources that evaluators could use in conducting a review of an OSP’s operations.

<table>
<thead>
<tr>
<th>People Methods</th>
<th>What People</th>
<th>Uses</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversation/discussion</td>
<td>Originators of program</td>
<td>Understanding</td>
<td>Conversation/discussion/interview</td>
</tr>
<tr>
<td>• single person</td>
<td>University, college, department administrators</td>
<td>• opinions</td>
<td>• requires commitment of time</td>
</tr>
<tr>
<td>• group</td>
<td>Committees</td>
<td>• attitudes</td>
<td>• may be costly</td>
</tr>
<tr>
<td>Interview</td>
<td>Evaluation initiator(s)</td>
<td>• expectations</td>
<td>• difficult to probe or discuss sensitive issues</td>
</tr>
<tr>
<td>• face-to-face</td>
<td>Office staff</td>
<td>• reactions</td>
<td>• results influenced by who is selected to interview</td>
</tr>
<tr>
<td>• telephone</td>
<td>Recipients of office services</td>
<td>Gathering information prior to preparing questionnaire</td>
<td>• may inhibit honesty</td>
</tr>
<tr>
<td>Questionnaire/survey</td>
<td>• experienced</td>
<td>Analyzing questionnaire responses</td>
<td>Questionnaires/survey</td>
</tr>
<tr>
<td>• structured</td>
<td>• new</td>
<td>Exploring issues/areas in depth</td>
<td>• difficult to obtain sensitive information</td>
</tr>
<tr>
<td>• semistructured</td>
<td>Office administrator</td>
<td>Obtaining information from large population</td>
<td>• respondents may not be truthful</td>
</tr>
<tr>
<td>• unstructured</td>
<td>Administrators from related offices</td>
<td></td>
<td>• require follow-up to obtain adequate response level</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Document Methods</th>
<th>What Documents</th>
<th>Uses</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count numbers of documents</td>
<td>Reports</td>
<td>Identify other data to collect</td>
<td>Documents</td>
</tr>
<tr>
<td>Sort into types</td>
<td>Schedules</td>
<td>Gather information prior to preparing questionnaire</td>
<td>• may be disorganized</td>
</tr>
<tr>
<td>Analyze content</td>
<td>Minutes of meetings</td>
<td>Provide</td>
<td>• may be unavailable</td>
</tr>
<tr>
<td>Assess quality of material</td>
<td>Memos</td>
<td>• insights</td>
<td>• may not be accurate</td>
</tr>
<tr>
<td>Consider trends</td>
<td>Letters</td>
<td>• interpretation</td>
<td>• require time to read</td>
</tr>
<tr>
<td>Gather factual data</td>
<td>Workshop outlines, attendance records</td>
<td>• detail</td>
<td>Data/trends/statistics</td>
</tr>
<tr>
<td>Analyze using checklists</td>
<td>Work samples</td>
<td>• history</td>
<td>• timing of when data collected may slow results</td>
</tr>
<tr>
<td>Perform statistical analysis</td>
<td>Fiscal records</td>
<td>Show</td>
<td>• may be unavailable</td>
</tr>
<tr>
<td>“Eyeball” data</td>
<td>Expenditure records</td>
<td>• organization</td>
<td>• may lack explanations</td>
</tr>
<tr>
<td>Use ratings</td>
<td>Policies, rules</td>
<td>• operation</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Client demographics</td>
<td>• intent</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Client patterns of use</td>
<td>Quantify workload</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Client logs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project plans, timetables</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Figure 15 (continued)

<table>
<thead>
<tr>
<th>Observation Methods</th>
<th>What Observations</th>
<th>Uses</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structured</td>
<td>Job performance</td>
<td>Understand</td>
<td>Observers can change the environment</td>
</tr>
<tr>
<td>Semistructured</td>
<td>Social interaction</td>
<td>• relationships</td>
<td></td>
</tr>
<tr>
<td>Impressionistic</td>
<td>Client interaction</td>
<td>• events</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Setting</td>
<td>• centers of power</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Environment</td>
<td>• activity</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• behavior</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• environment</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Evaluate frequency of occurrence</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Context Methods</th>
<th>What Considerations</th>
<th>Uses</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe</td>
<td>Facilities</td>
<td>Understand</td>
<td>All of the above</td>
</tr>
<tr>
<td>Interview stakeholders</td>
<td>Schedules</td>
<td>• relationships</td>
<td></td>
</tr>
<tr>
<td>Read reports</td>
<td>Organizational patterns</td>
<td>• constraints</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Management styles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Political forces</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Economic realities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Attitudes of personnel</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Protocols followed</td>
<td></td>
<td></td>
</tr>
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<td></td>
<td>Formal power structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal power structures</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distribution of responsibility</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Massachusetts Institute of Technology (MIT) has created a Research Administration Improvement Initiative (RAII). This initiative is intended to improve the efficiency and effectiveness of research administration activities throughout the institution in a proactive manner. Through a broad-based initiative, the program actively solicits ideas from and involvement of the many stakeholders. Key elements of the program are high-level institutional commitment from senior management, cooperation and collaboration between academic and central administration, and input from faculty.

The RAI provides a formal organizational structure and reporting process designed to inform senior management on improvements that are needed to ensure compliance with external regulations and institutional policies, thereby minimizing risk of noncompliance. Through a team structure, the RAI will solicit input, evaluate process and policy improvements, and make recommendations to management. Management will evaluate and act on RAI recommendations. Where recommendations are identified for implementation, the senior management will direct the appropriate department head or process owner to implement the recommendations.

**Team Structure:**
1. Steering committee composed of administrators throughout campus (equally divided between central and academic administration)
2. Provost, Executive Vice President (Finance), and Vice President for Research involved to show top-level buy in
3. Faculty advisory committee used as focus group (solicit concerns and issues, share proposed solutions)
4. Co-chairs consist of an assistant dean and the Director, Office of Sponsored Programs
5. Each thrust (listed below) has a subteam that involves additional campus individuals and is led by an individual from the steering committee

**Thrusts:**
1. Roles: understand research administration roles and develop effective organizational themes and models
2. Processes and policies: create, improve, document, and communicate processes, policies, and responsibilities
3. Training: develop comprehensive training systems; improve training materials and programs
4. Technology resources: build suite of systems, tools, and reports that support research administration

“The RAI model described above is a proactive approach to compliance that focuses on the root causes for non-compliance. The focus of RAI is on prevention rather than detection and emphasizes a collaboration of both the academic and administrative community in finding ways to improve research administration at MIT” according to Patrick W. Fitzgerald, Director, Office of Sponsored Programs.

**Source:** Massachusetts Institute of Technology, Patrick W. Fitzgerald, Director, Office of Sponsored Programs.
## Figure 17: Key Components of Strategic Planning

<table>
<thead>
<tr>
<th>Diagnosis</th>
<th>Environmental Scanning</th>
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<tbody>
<tr>
<td>☐ identify arenas</td>
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<tr>
<td>☐ select arenas of importance</td>
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<tr>
<td>☐ search for information resources</td>
<td></td>
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<tr>
<td>☐ select information resources</td>
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<tr>
<td>☐ identify criteria by which to scan</td>
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<tr>
<td>☐ scan</td>
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<tr>
<td>☐ determine special actions to take from the scanning results</td>
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<table>
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<tr>
<th>Decision</th>
<th>Evaluating the Issues</th>
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<tbody>
<tr>
<td>☐ relate to major arenas and appropriateness to office mission</td>
<td></td>
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<tr>
<td>☐ relate to resources impacted: human, money, facilities</td>
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<td>☐ timing</td>
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<tr>
<th>Action</th>
<th>Goal/Objective Setting</th>
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<td>☐ formulate alternate strategies</td>
<td></td>
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<tr>
<td>☐ evaluate and select strategies</td>
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<tr>
<td>☐ develop tactical plan</td>
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<tr>
<th>Implementation</th>
<th>integrate strategies/tactical plans</th>
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<tr>
<td></td>
<td>allocate resources</td>
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<th>Monitoring</th>
<th>review process against plan</th>
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<tr>
<td></td>
<td>evaluate plan’s effectiveness</td>
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13910  **External Reviews of Sponsored Programs**

As discussed previously in this chapter, program assessment or review is a broader evaluation than found with an audit or a business process review. A program review looks at the totality of an area or operation and how that area or operation meets the needs it was designed to meet. Program reviews are found in many areas in higher education, one of the most common in higher education is the academic program review. An academic program review has the intent to improve the quality of that academic program and to allow the faculty an opportunity to reflect on practices and the role of that program in the context of the institution. The review provides the opportunity to look at strengths and challenges of the program and to help assess if the program offering is in line with the institution’s priorities and directions. Typical academic program reviews contain a self-assessment segment followed by a review conducted by a faculty committee, and many committees include external faculty. The faculty who serve on the review committee have relevant expertise and therefore are peer reviewers. The academic program review as an example of program assessment illustrates its broader scope in comparison to conducting an audit or business process review.

13910.1  **The NCURA Peer Review Program**

The NCURA Peer Review Program for sponsored programs is the administrative equivalent and a parallel process to the academic program review. Just as with academic program reviews, a review of the sponsored programs operation has the intent to improve the quality of the program and to allow the constituents an opportunity to reflect on current practices and the role of that program in the context of the evolving directions and needs of the institution. In this context, the review provides the opportunity to look at strengths and challenges of the program and to help assess if the program offering is in line with the institution’s priorities and directions. The review provides an objective standard of excellence and allows the institution to make informed decisions on programmatic directions and resources. The review is conducted by senior leaders in research administration.

While program review can proceed through many steps, and each institution and its process may vary somewhat, generally there are several common core steps that occur. The following cycle of program assessment is put in context of sponsored program operations (see Figure 3920-1).
Step 1. Inventory Overall Sponsored Program Effectiveness.

Any program has multiple stakeholders and multiple areas of the institution with which they intersect. For some types of programs, a regular review cycle is determined by the institution. For other institutions, the review cycle is not predetermined and generally occurs when either the institution pro-actively decides to assess program effectiveness or when there are fractures in the processes, systems, or with constituents. Fractures may be identified by senior institutional leadership, research or financial leadership, research advisory or other committees, or sponsored program office leadership. There are numerous reasons why fractures occur. Some reasons may include: stressed systems due to significant growth, new and inexperienced staff, or changing needs of faculty. When fractures are identified as persistent and impacting the enterprise, they generally rise to a level of importance that needs to be addressed.

Institutions may find a review of the NCURA National Standards assists their inventory of sponsored programs effectiveness. These Standards can be used as a general guide to help review areas that may need attention or that align with fractures that have been identified.

Step 2. Engage Office and Leadership in Discussions.

Discussion with both office and institutional leadership is an important next step when contemplating any review activity. This discussion is essential regardless of
what prompts a review (a regularly occurring assessment, being pro-active in reviewing office effectiveness, or identified fractures in service or operations). Discussions allow the institution to plan steps when there is a regular assessment cycle of the office, or to more thoroughly discuss identified fractures and to analyze the information related to those fractures and possible solutions.

Many institutions will contact the NCURA Peer Review Program to discuss the program and how it might assist them as they determine next steps. Preliminary discussions can help the institution see how the peer review can provide additional information to assist the institution and the type of recommendations made through the review process that would help move an operation forward.

**Step 3. Plan for Sponsored Program Review.**

When there is a regular cycle of review, a pro-active assessment, or when discussion of fractures leads to a step of external assessment, the process will necessarily extend beyond the office staff and therefore become a more visible activity. Support for and understanding of the assessment process becomes a critical step before moving forward. In this step institutional leadership makes decisions on the review, the breadth, and the timing. As appropriate to the institution, key constituents are notified and engaged in the discussion.

The NCURA Peer Review Program becomes engaged in Step 3 when the institution decides to utilize this structured review process with their sponsored programs operation.

**Step 4. Conduct Program Review.**

The ultimate outcomes of the administrative program review are unknown as of this An external program review generally involves external individuals reviewing relevant background materials, spending some period of time on-site and meeting with constituents and leadership, and preparing some type of report; some consultants utilize a verbal report-out and others a written report.

The NCURA Peer Review Program has a template for the institution to gather background materials relevant to the review of sponsored programs. After a review of the materials, the Review Team has a pre-site visit conference call with the institution to discuss relevant areas prior to their site visit. Days on-site are defined by the size of the sponsored programs portfolio and can be extended at the request of the institution. The report-out from the NCURA program is of two parts: part 1 consists of an exit meeting report that provides broad observations based on the reviewers analysis of background material and meetings with constituents; part 2 consists of a detailed written report that describes what is in place, recommendations, notable practices, and links and references to resources.

**Step 5. Analyze Review Results.**

Analyzing the review results is a critical step and allows the program and leadership to put recommendations in context with their understanding and perspectives. Where recommendations have been made based on incomplete information the program has the opportunity to discuss that aspect with leadership.

The NCURA Peer Review Program provides a final draft of the report to the institution
for review of inaccuracies. This key step allows the institution to present additional information for consideration prior to the final report being issued.

Step 6. Prioritize and Plan Program Changes.
Once the report has been finalized, the program and as appropriate the institutional leadership assesses recommendations in terms of priorities. Priorities may be defined by operational needs, constituent needs, or institutional goals and needs. Resource requirements to respond to recommendations may be a significant consideration in the timing of implementation.

Step 7. Implement Program Changes.
Implementation of recommendations that lead to change should follow a well-defined and written plan of action that includes responsible persons, deliverable dates, and specific actions.

Step 8. Monitor and Assess Specific Program Changes Implemented.
Once a change to the program has occurred, a plan for monitoring should be developed and followed. This plan should use institutional staff to regularly assess a very focused aspect of the program and/or constituents impacted by the specific change made.

(return to) Step 1. Inventory Overall Sponsored Program Effectiveness. Programs constantly evolve, constituent needs continue to change, and institutional and sponsor expectations continue to evolve. For programs to be effective, the review process should regularly occur and assess the overall program.

Features of the NCURA Peer Review Program
As an example of an external evaluation, the NCURA program follows the general description for external evaluation found earlier in this chapter and has a number of features that illustrate this category of review.

The reviewers conducting the program are experienced in the field of research administration and external to the institution. The profession of research administration requires senior and experienced research administrators engaged in the review process. Unlike a consultant who takes direction from the institution, the NCURA Peer Reviewers are directed by the Peer Review Program and have participated in extensive reviewer training and mentoring in the process of peer reviews.

The assessment encompasses the entire program. An assessment of sponsored programs is not defined by individual audits of specific policies or practices. Rather it looks at the overall operation and how well that operation is meeting the needs of the institution and constituents, is efficient, and is positioned for future directions. The assessment looks at how well the institution integrates their goals and directions with fundamental operations. The totality of policies and practices is reviewed in the context of general understanding and application.
A program review utilizes a wide variety of data. A robust assessment gathers information widely and through a number of techniques. For the NCURA Peer Review this includes such information as descriptive material, self-studies, prior evaluations, interviews from constituents representing all the stakeholders within the institution, and data that illustrates scope of activity and trends.

A written report is provided to the institution. External evaluations should provide a thorough written report following the site visit. The written report should lay out the measures used for the review, the analysis of data and information, and conclusions and recommendations offered. The NCURA Review Report provides a detailed written description of current activities, best practices, and recommendations to strengthen the program. The report is aligned to the National Standards used to frame the review.

National Standards Guiding a Review
The NCURA Peer Review Program conducts a review based on a set of National Standards\(^1\) that frame the review and define characteristics of effective sponsored program operations. These Standards were developed by leading research administrators, from all types and sizes of institutions and have been endorsed by NCURA, a 7000+ member professional organization. As such, they embody reasonable expectations for institutional commitments and operations.

As appropriate to a program-level assessment, the National Standards\(^1\) cover the broad spectrum of areas that represent a sponsored programs operation. These areas are:

1. Institutional Commitments
2. Institutional Communications
3. Research Administration Policy Development
4. Program of Education About Sponsored Programs
5. Assessment and Institutional Preparedness
6. Information Management
7. Institutional Affiliations and Relationships
8. Sponsored Program Operations: Funding and Proposal Services
10. Sponsored Program Operations: Award Acceptance and Initiation
11. Sponsored Program Operations: Award Management
12. Institutional Integration of Obligations Made with Sponsored Program Activities

\(^1\) A copy of the National Standards may be requested by contacting the NCURA Peer Review Program at www.ncura.edu
(13) Export Controls
(14) Research Integrity
(15) Protection and Oversight Related to Research Activities

Key Areas When Determining Your External Reviewer
A number of companies and individuals fall within the external evaluation category. Some institutions have utilized the services of an individual or individuals, known by someone within the institution, to conduct a review of their operations. Some institutions have used one of the several large consulting firms. Others have used the NCURA Peer Review Program. For any external review, the institutions should carefully review the following checklist of items to determine the reviewers and process that best meet their needs.

◆ The individuals performing the review are experienced research administrators, have been vetted as to their qualifications, and understand and been engaged in the review process.
◆ The reviewers have experience with the institution’s particular culture and environment.
◆ The reviewer(s) have the demonstrated expertise in the breadth of the review activity.
◆ The reviewers have no conflicts of interest and no close ties to the institution or key individuals at the institution.
◆ The cost of the review is appropriate for the deliverables.
◆ The review process itself is objective and has a consistency across institutions.
◆ The framework for the review and elements that are assessed are clearly understood by the institution.
◆ There is clear understanding on the type of report-out that will be given to the institution.

Why Institutions Initiate an NCURA Peer Review
There has been a broad spectrum of reasons why institutions initiated an NCURA peer review.

(1) Significant Growth in Sponsored Programs as a Result of Strategic Goals: Significant growth has been one of the most frequent reasons for an NCURA review. Generally the growth in activity has not prompted the review so much as the decline in corresponding support offered by sponsored program operations to investigators. As a result of stressed and under-resourced operations, efficiencies declined.

(2) Persistent Faculty Complaints: Some institutions experienced long-term persistent complaints from faculty. As a result, senior leadership wanted an objective review of operations and a clearer understanding of the underlying issues that were generating the faculty concerns. The NCURA peer review provided
the opportunity for experienced research administrators from outside the institution to listen to perspectives and assess those in the context of the review of operations.

(3) Educate and Inform: Some institutions have utilized the review to better educate and inform the institutional stakeholders about sponsored programs issues and requirements. Most often found with smaller institutions, the review provided opportunities for leadership and faculty to receive an external explanation of institutional commitments that come with sponsored program awards.

(4) Administrative Review Cycle: Beginning to emerge is the institutional requirement for a regular cycle of review of administrative units. This trend is illuminating in that it signals that institutions are recognizing the need for ongoing investment in an assessment process in order to continue to improve efficiencies and meet project director needs. This is one of the most powerful reasons for a review and it provides a strong indicator that the institution is actively managing their culture for research administration.

(5) Baseline Data and Check-in on Quality: Some institutions use the NCURA review as an opportunity to check the direction of a program. For newer programs, it provides a baseline of data for the institution.

(6) Reorganization: A number of institutions have recently implemented or are anticipating reorganization of their sponsored programs operation. When done prior to reorganization, the review provides data that is useful to the decision-making surrounding reorganization. When used after reorganization, it serves as an opportunity to check-in on merged systems and procedures.

(7) Leadership Change: Leadership change is an ideal time to implement a review when there has been none previously, as has been done by several institutions. This particular timing provides an opportunity for new leadership, whether it is the senior research administrator or a Director of sponsored programs, to come into their position with a solid foundation of information that has not been biased due to employment or history with the institution. In many ways, this accelerates the acclimation process for the new leadership.

(8) School or College Level Operations: One of the newest trends is the application of the NCURA Peer Review to a school or college level operation. In considering sponsored program operations at large research or medical universities, the organizational structure typically has a significant part of the operation residing at the school or college level. This type of organization may be very decentralized with most functions occurring at that level. As such, the NCURA review at the school or college level is a more appropriate and focused review on that particular unit, applying the National Standards to that operation, and looks at the relationships between that operation and the central operation. When the review is conducted for the central operation, the focus is on that central operation, applying the National Standards to that central operation, and looks at the relationships between that operation and the school or college operations.
The NCURA Peer Review Cycle
The cycle of steps in the NCURA Peer Review Program, and most likely in many external evaluation activities of a comprehensive nature, is illustrated in the following diagram (see Figure 3920-2).

**Figure 3920-2: NCURA Peer Review Program**

Step 3.a. Define the NCURA Review Team. Given the breadth of the National Standards, a minimum of a two-person Review Team is used (larger size institutions have larger Teams). NCURA defines a Review Team that matches characteristics of the institution. Institutions have differing characteristics that impact the culture and environment. It is important to have reviewers who are familiar with that type of culture and environment. As such, some indicators that are used for defining the team include experiences with:
- similar size sponsored program portfolios
- similar size institutions
- State, private, non-profit, or affiliated foundation experience

Step 3.b. Frame the Self Assessment Process. For any external evaluation, institutions will need to prepare materials that describe what they do and how they do it. Prior to beginning that process the institution should consider how to approach a self assessment process and which stakeholders should be engaged. The self assessment process can often be combined with the external peer review process.
**Step 3.c. Compile the NCURA Briefing Book.** NCURA provides a template Briefing Book, which is a tool to gather the list of policies, procedures, organizational charts and other information utilized by the Review Team. Guided by the National Standards, developed by NCURA, the Briefing Book provides a specific listing of documents that help Reviewers understand sponsored program operations. The Briefing Book contains select questions that provide additional information for the Review Team. The process of compiling the Briefing Book additionally satisfies the valuable step of conducting a self assessment.

**Step 3.d. Complete Pre-Site Visit Activities.** Prior to the site visit, the institution completes a number of steps. These include preparing the site visit itinerary, the charge letter to the Reviewers, a pre-site visit discussion with the Review Team, and notifying individuals participating in the site visit of the purpose and focus of the site visit. The site visit itinerary is a critical part of the site visit and reflects the range of stakeholders who need to be part of the discussion. While the institution will draft the itinerary, based on guidelines suggested by NCURA, the Reviewers and the NCURA Program Coordinator will review the itinerary and suggest modifications to best meet the needs of the Reviewers and the priorities of the institution.

**Step 3.e. Host Site Visit with NCURA Review Team.** The institution manages the overall site visit. This entails creating an environment where back-to-back meetings with multiple participants are managed in a non-intrusive manner.

**Future Updates**

The NCURA Peer Review Program was launched in the spring of 2008. Between 2008 and 2012, the program has conducted over 45 reviews of sponsored program operations. The reviews yield a number of interesting themes and trends and these will be discussed in future updates.
Supplementary Material

This section includes expanded coverage of topics relating to assessing your office of sponsored programs. These materials are culled from a variety of authoritative sources.

Turnabout Is Fair Play: Administrative Program Review of an Office of Sponsored Programs*
John Falconer, University of Nebraska, Kearney and Bill Campbell, University of Wisconsin, River Falls

Academic departments at colleges and universities typically undergo academic program reviews every five years to assess their resources, procedures, and impacts. Though program reviews can be administrative headaches, when done properly they give valuable feedback to departmental development efforts. In the spirit of continuous improvement, the Office of Sponsored Programs at the University of Nebraska at Kearney subjects itself to a review process similar to that prescribed to academic programs. This article, written by the director of the sponsored programs office (John Falconer) and the chair of the review team (Bill Campbell), describes the most recent review process. The two provide first-hand perspectives to the reader in an effort to share information that may be of value to sponsored research offices at other colleges and universities. Falconer provides the narrative frame. Campbell’s comments, printed in italics, add the external evaluator’s perspective on the process and its results.

Background
The University of Nebraska at Kearney (UNK) is a predominately undergraduate institution with about 6,500 students and 300 faculty members. The university is comprised of four colleges that include Business and Technology, Education, Fine Arts and Humanities, and Natural and Social Sciences. UNK joined the University of Nebraska system in 1991, which, among other things, led to reduced teaching loads and increased expectations for scholarly productivity.

The Office of Sponsored Programs (OSP) provides pre-award services to the campus in pursuit of extramural funding, while also operating a summer student research program. OSP does not have a fixed operating budget, but receives a portion of recovered indirect costs (about $60,000 in Fiscal Year 2007). The unit has two

* This article is reprinted from NCURA Newsletter, Vo. XXXIX, No. 5, December 2007/January 2008, published by the National Council of University Research Administrators. It is used with permission of the publisher.

John Falconer, Ph.D. (falconerj@unk.edu) has served as Director of the Office of Sponsored Programs at UNK since 1999. He previously worked as director of development for American Forests in Washington, D.C. Bill Campbell, Ph.D. (wm.e.campbell@uwrf.edu) joined UWRF as Director of Grants and Research in 1990. Before then, he directed academic assistance and honors programs and taught philosophy at several universities. He leads proposal-writing workshops and teaches a graduate course in grants and proposal-writing.
full-time professionals and a part-time secretary. UNK submits 50–70 proposals a year, and was awarded about $3 million in Fiscal Year 2007.

OSP underwent a review in 2002 and volunteered to participate in a 2007 campus initiative to more formally extend the academic program review process to administrative units. The director of OSP, John Falconer, in consultation with the associate vice chancellor for academic affairs, approached Bill Campbell of the University of Wisconsin-River Falls (UWRF) to lead the review process. Campbell was identified because of his experience in both extramural funding and student research at predominately undergraduate institutions. Together, Campbell and Falconer developed a plan for the review, which included a self study, a site visit, and the production of a final report.

I was happy to sign on for several reasons. I've known John for years and was confident we could work together. Additionally, I suspected — correctly, as it turned out — that his office would be well-run and his programs productive. UNK is approximately the same size as UWRF and produces a comparable flow of grant proposals (70–80 per year) and external funds ($3.65 million in 2006–2007). I hoped to steal some useful ideas from their procedures. Finally, though I have considerable experience as an external evaluator of grant-funded projects and of higher education programs, I had never evaluated either a grants office or undergraduate research program before, so this was an intriguing opportunity.

Self Study

UNK provides standard guidelines and procedures for academic program reviews. These guidelines were adapted to OSP through simple modifications, mostly in the design of the self study. The purpose of the self study was to give data and procedural information to the review team for their assessment, as well as to prepare them for interviews during the site visit.

The first two sections of the self study template — Mission and Resources — needed little change. Those sections simply document the purpose, planning process, budget, space, equipment, and personnel for the department. However, the third section of the self study template focused on Effectiveness, which was largely comprised of information about academic accreditation and student achievement. For the OSP administrative review, those indicators were replaced with descriptions of services offered and application and award data. The self study also included comparative information from our peer group institutions, linked the OSP mission to campus and university system mission documents, and identified areas within sponsored programs that were of particular concern to staff. The document was prepared over a period of two months (allowing for internal reviewers) but took about 10 hours of actual writing time.

UNK's self study was very complete. It included 18 pages of narrative plus appended charts, tables, and previous reports. John also listed the members of the Review Team, which I was to chair. Other team members included three faculty and one assistant dean representing the four colleges. Two of the faculty had extensive grant experience in the lab and social sciences. The third was a junior faculty member with little grant experience. (As it turned out, his relative naïveté
was an asset. He could ask the obvious questions that the more experienced members of the team didn’t think of; the answers to those questions were frequently the most revealing.) We set a date in early February for my site visit and agreed on the sorts of individuals we would interview.

Site Visit

I flew to Kearney on a Sunday afternoon, and we began work with a very congenial dinner on campus with the review team, the dean of graduate studies and research, and the associate vice chancellor for academic affairs. Following dinner, the team agreed on general strategies and procedures and began to get a feel for our common purpose and individual strengths.

The review team selected interview participants according to several factors. The first selection criterion focused on the need to involve people from each of the four colleges on the UNK campus. To do that, OSP staff composed a list of faculty with direct experience in extramural funding at UNK. The team shared the list with an upper administrator who made some additional suggestions. The listed individuals were invited to participate in interviews, as was staff with similar grant experience. Next, the review team met with the academic deans. Finally, because of the student research component of the OSP portfolio, the review team also asked to meet with several students.

The team interviewed faculty, administrators, and students during Monday morning and afternoon. The students were charming, of course, and were very open and straightforward in telling us about UNK’s Summer Research Program. Faculty were considerably more guarded. Who wants outsiders or insiders taking a critical look at their work? The members of the review team were quite successful in easing their colleagues’ concerns and eliciting the strengths and weaknesses of UNK’s grants office, and undergraduate research programs.

The toughest interviews were with administrators. All were supportive of the grants endeavor in a general way, but only the immediate supervisors of the Office of Sponsored Programs expressed either enthusiasm for sponsored programs or deep understanding of how the office works. One dean seemed distanced from the research interests of his faculty and expressed little interest in assisting them.

The self study was invaluable in preparing the team for these interviews. Absent the voluminous data John provided in advance, I would have had no idea of the institution’s history and culture. The other members of the team would have had little idea of the grants and undergraduate research activities in other departments or colleges of the university. But, armed with all that data, we were able to ask probing — though always gentle and respectful — questions in our interviews.

Late on Monday afternoon, the team met to review our impressions and agree on findings. On Monday night, I drafted some tentative recommendations which the team reviewed, edited, and approved early on Tuesday morning.

Following preparation of the draft summary, the review team debriefed Falconer to make him aware of the major findings. From the OSP perspective, this was an important opportunity to interact with the review team. In a couple of areas, the review team was interested in issues where they had incomplete information (from the self study or interviews), so Falconer was able to provide more background. In
other areas, the debriefing provided a low-pressure and interactive setting for identifying concerns. This was important preparation for the subsequent exit interview with UNK’s senior vice chancellor, associate vice chancellor, and dean of graduate studies and research.

In the exit interview, the team reported that the Office of Sponsored Programs was providing excellent service, but that it worked in something of a vacuum. Our diagnosis was that the campus is still in transition from a college to a university and that faculty and administrators vary widely in their vision of the institution’s mission and how they fit into it. We recommended that administration articulate the mission and goals of the Office of Sponsored Programs and publicize that mission and the services the office provides throughout the university. Some responses were enthusiastic; others were stoic. In retrospect, I take their response as a sign that our diagnosis was correct.

The review team disbanded at noon on Tuesday, and I flew home. Over the next week, I drafted a report summarizing our review and addressing each category of the self-study. We expressed our overall concern regarding the institution’s knowledge of and commitment to the mission of OSP and listed five specific recommendations for the office itself. The members of the team reviewed and edited the report. In short order, we agreed on a final version, which I submitted to John for distribution across campus.

Conclusion

The ultimate outcomes of the administrative program review are unknown as of this writing, but some things are clear. First, the final report provided an independent assessment of OSP operations, documenting strengths as well as areas in need of improvement. The university administration is aware of the review team findings, and may, over time, use the information to institute change. Second, establishing data on resources, processes, and outcomes will provide useful benchmarks for the future. Third, the review team offered very relevant suggestions that have been implemented by OSP, independent of broader campus change. These include more organized outreach efforts to new faculty, more relevant goal setting for OSP (in collaboration with academic deans), and better proposal writing services.

From my perspective, this was an extremely satisfying assignment. The self study was comprehensive and accurate. The review team quickly reached a critical level of trust and common understanding. Our interviews were interesting and revealing, and helped us reach conclusions about the institution and the Office of Sponsored Programs that were both sound and — in my view, at least — important. Our recommendations were received well by John and OSP staff, and at least politely by senior administration. I look forward to learning the long-term impact of our review, but John assures me that the short-term impact has been positive.
A Peer Review Reviewed: Anticipation, Expectations and Results
Joyce Freedman, Consultant; Randolph Hall, Sara Judd, Jeri Muniz, University of Southern California; and Kerry Peluso, Emory University

Over a decade ago, the NCURA organization conceived of the idea that NCURA could provide a valuable service to the community of research institutions by offering peer reviews. It took years of effort and lots of hard work for NCURA to launch this service.

This article will examine the NCURA Peer Review Program and detail the experience of a review conducted at the University of Southern California (USC).

Peer Review – Defined and Examined
Peer reviews are commonplace in the world of academia; the funding agencies perform peer reviews to determine which proposals will be funded and which not; scientific and academic journals conduct peer reviews of articles that are to be published; and academic departments consult outside peer reviewers to assess graduate and undergraduate programs.

What exactly is a peer review and why are they performed? A peer review is an outside evaluation of work or performance by people in the same field in order to maintain or enhance the quality of the work or performance in that field. The word “peer” is often defined as a person of equal standing in the same profession who are of the same or higher ranking.

Peer reviews are based on the concept that a diverse group of people, not directly connected with the work being reviewed, will be able to make an impartial evaluation. Thus most peer reviews will utilize an independent group of reviewers in order to discourage favoritism and obtain an unbiased evaluation. Typically, the reviewers are not selected from among the close colleagues, relatives, or friends and potential reviewers are required to disclose any conflicts of interest.

So how does the NCURA Peer Review Program work and what makes it so special?

The Peer Reviewers – Selection Process
NCURA’s Board appointed Peer Review Selection Committee is responsible for reviewing applications for potential peer reviewers and making recommendations to the NCURA Board for appointments of new Peer Reviewers. The requirements for an application to the peer review program include a minimum of ten years experience in the field of research administration with a history of demonstrated expertise and leadership in the field. Applicants also need to provide several references for consideration. Most Peer Reviewers have significantly longer than the required ten years of experience. Applications are carefully reviewed to ensure the highest quality of reviewers possible.

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Once selected, Peer Reviewers are provided with training on the NCURA Peer Review process. A Team Lead is provided for all reviews. The Lead assists the reviewers with understanding the process, answers questions and provides guidance. Feedback regarding each of the reviewers is obtained for each review from the participating institution as well as the other reviewers on the team to ensure a consistently high quality level of review.

The NCURA Standards

Each peer review is conducted in alignment with the NCURA Peer Review standards. Careful consideration was given in the development of these Standards. They were developed to emphasize the key areas important to a comprehensive research administration program. The Effective Management Practices for managing externally funded research programs developed by the Council for Governmental Relations (COGR) was used as a foundation for the development of the NCURA Standards. The detailed standards cover concerns within the following topical areas:

- Organizational Structure Staffing and Resources Communication and Outreach Education
- Compliance Risk Assessment
- Electronic Research Administration
- Collection and Dissemination of Funding Information
- Proposal Development and Assistance Proposal Review and Submission Collaborative Project Development Agency Liaison
- Award Acceptance and Initiation
- Ancillary Agreements Associated with Research Grants and Agreements
- Subawards Award Acceptance Process Award Activation and Notification Award Management Research Ethics

The Pre-Visit Planning Process

An institution with an interest in having an NCURA Peer Review conducted should contact NCURA’s Peer Review Program Coordinator, Peggy Lowry, for further information on the process including the cost estimate. The cost varies by size of the institution, as larger institutions generally require additional reviewers and time. Once the institution decides to move forward with the review, Peggy Lowry will work closely with the institution to determine which peer reviewers would be the best match for the institution. The reviews are scheduled according to the institution’s needs and availability.

Once the reviewers are identified and the review is scheduled, the institution is presented with a list of documentation that needs to be provided in advance to the reviewers. This is referred to as the “Briefing Book”. Along with the Briefing Book, the institution also provides a “charge letter”, outlining their expectations for the review. While all peer reviews follow a similar pattern, the institution is given the opportunity to outline the areas that they feel should be given emphasis during the
site visit. Peggy Lowry assists the institution in planning who should be included in the interviews that will be conducted as part of the review. The reviewers will conduct an extensive review of this documentation provided prior to a pre-visit phone conference with representatives from the institution. This previsit phone conference is generally scheduled approximately two weeks prior to the site visit. During the phone call, the schedule and charge letter are discussed as well as any questions regarding the documentation. This call gives everyone an opportunity to discuss the plans for the site visit and address any questions or concerns regarding the review.

As a result of this pre-visit planning process, NCURA Peer Reviewers begin the review with an established foundation of knowledge regarding how research administration works at the institution.

The Site Visit and Assessment — Here Comes the NCURA Review Team

With the institution’s charge letter and the briefing book in hand, the next step is the site visit. Although, all parties have already put a tremendous amount of work into the preparing for the review, the site visit is the most telling part of the entire process. It is at the site visit that the review team can really get a sense of the dynamics of the institution. The site visit is normally scheduled for two to three days depending upon the size and needs of the institution and is conducted by two to four trained NCURA peer reviewers. Site visits normally start with an entrance meeting and end with an exit meeting, at which time the Review Team presents high-level observations.

What are the real areas of concern for the institution as well as what seems to work for the campus and what doesn’t all come out during the site visit. The most productive reviews usually include the senior leadership. Their support and active participation demonstrates that the institution is dedicated to the review process and committed to process improvement.

Because each review is unique and adapted to the needs of the institutions, site visits will differ from institution to institution. However, what makes the NCURA Peer Reviews so special is that every review is based on the same set of standards, so that each college, university, research institution, hospital, not-for-profit, etc. are reviewed under the same criteria. NCURA, not the institution, has established the standards. The institution determines who will participate, where it will occur and when it will happen.

The NCURA Peer Review Team conducts interviews scheduled from the break of day to the setting sun and spends its evenings occupied with writing up individual observations of the day and executive sessions where the team can discuss progress and determine what high-level observations might be included in the exit interview.

The Report

The real work for the Review Team begins upon returning home. Having pre-assigned standards to conquer, each reviewer now starts to pull together all the information gathered from the briefing book, the institution’s websites, the interviews and site visit sessions. Through this process, the final document starts to come
together in one cohesive report.

The report goes through a great number of iterations from rough outline to finished and polished document. The draft materials are sent back and forth from the individual reviewers to the team lead and to NCURA’s Peer Review Coordinator who consolidates the report and edits as well as evaluates the hard questions and formats the report. Strict deadlines are set for each step of the process. From the day the reviewers return home, the clock is ticking. A final draft report is submitted to the institution for their comments within six weeks following the visit. After receipt of any comments from the institution, and incorporating any revisions a final report is submitted to the institution.

The hope of every Review Team is that the process is received well and that recommendations are embraced and implemented. The experience at the University of Southern California (USC) was as good as a peer review could get. To this day, a year after the final report was submitted, USC is working on implementing most of the recommendations. How nice is that!

The Institutional View

University sponsored projects administration offices across the nation face similar challenges: limited resources, negative customer service perceptions, and staff turnover. Like many institutions, USC’s Department of Contracts and Grants (DCG) has long been the focus of faculty frustration with the level of customer service.

In an effort to address these concerns, DCG initiated a three-pronged review – an IT needs assessment, an internal process review and assessment, and a NCURA Peer Review. The NCURA Peer Review has proven to effect a significant change at USC, largely due to being:

◆ A 360-degree evaluation of the USC research enterprise, both central and departmental, along with their interactions. A 360-degree review identifies the problematic issues throughout the complex support network of the institution, thereby providing a balanced, comprehensive assessment.

◆ A review conducted by experts in research administration. A team is assembled that represents expertise throughout the full spectrum of the research administration services. Expertise of this scope and depth provides the foundational knowledge and experience to quickly and effectively identify the challenges that exist within the institution via the interview process, gain an in-depth understanding of those challenges and subsequently develop appropriate recommendations.

◆ An assessment conducted by external reviewers. An external review provides a balanced, unbiased review and associated recommendations.

In preparation for the site visit, significant organizational information was provided to the NCURA Peer Review Team. Interviews were arranged with key personnel from central offices involved in the research administration process, as well as the faculty and administrative leadership in the major schools and departments. Group and individual meetings were arranged with central DCG staff members at each cam-
pus. All of these activities provided context for the reviewers, but more importantly, allowed USC’s research enterprise to come together and personally participate in the review. Participation in the review process facilitated the very collaboration USC needed to implement the recommendations of the Peer Review Team.

Recommendations, provided to senior leadership within 60 days of the review, substantiated many of the issues previously identified in both central and departmental areas; however, the external confirmation provided the needed support and the associated financial resources to move forward with the establishment and implementation of a prioritized action plan to address the institutional issues at every level. USC leadership took the NCURA recommendations and developed an action item matrix and associated timeline for completion, including these results:

◆ Change in the reporting structure of DCG, so that it now reports to the VP of Research.
◆ Initiation of development for a “cradle to grave” software system for research administration.
◆ Formation of a research administration task force, chaired by the Executive Director of DCG, to resolve coordination issues across units of the university.
◆ Redesign of the DCG website to focus on “how to” information for investigators.

A first order of business was to draft an institutional “roles and responsibilities” document to clearly delineate key processes and the associated responsible party for each. Through this process, USC realigned responsibilities to eliminate duplication of tasks, and to ensure that each task was performed by the unit that is best able to do the job. Senior leadership also drafted and distributed to faculty and staff a document entitled “USC’s Partnership for Sponsored Research and Other Scholarly Activities,” which has been a major step in establishing expectations of faculty and departmental units as well as demonstrating support of the central research administration activities. DCG is also in the process of initiating a new proposal review service, coupled with a “service promise” tied to investigators submitting their proposals on time.

DCG established several internal working groups to solicit feedback from DCG staff and to more directly engage them and to expand avenues of communication and collaboration. DCG has established regular meetings with other central offices to work together on process improvement initiatives for those processes that cross departments.

The NCURA Peer Review has had a significant impact on research administration at USC. Most importantly, DCG utilized the results of the Peer Review to actively engage USC stakeholders in the change process, thereby engendering from participants a feeling of valued participation, buyin and accountability in the outcomes. DCG has successfully facilitated the proactive and vital collaboration of central offices, such as DCG, Sponsored Projects Accounting and Purchasing, as well as created close working partnerships with Schools and departmental staff. We are confident that this more unified and comprehensive approach to addressing common issues will result in creating enhanced, more efficient institutional support for the research enterprise at USC.
While it is impossible to achieve perfection in any research administration organization, DCG has performed exceptionally well in the year since these changes were enacted, with more compliments than complaints, only moderate turnover, and vastly improved services.

**About the Authors**

**Joyce Freedman** is currently a consultant in higher education. Retired from UCSF where she was the Assistant Vice President for Research. She also served in that capacity at UC Berkeley and was the Assistant Vice President for Research at The University of Chicago. She has been a member of NCURA for over 20 years, served as chair of the western region; and elected to the Board of Directors and the Executive Committee; co-editor of the Newsletter for Biomedical topics; co-program chair for a summer conference; faculty on a national video conference and a webinar; speaker at regional and national NCURA meetings. Joyce is currently a peer reviewer for the NCURA Peer Review Program.

**Randolph Hall** is Vice President of Research and Professor of Industrial and Systems Engineering at the University of Southern California. He also chairs the Executive Leadership Group for Research for the Association for Academic Health Centers, and will publish the Handbook of Healthcare System Scheduling for Springer later this year.

**Sara Judd** is the Director for the Department of Contracts and Grants at the University of Southern California (USC), overseeing the professional staff responsible for the pre-and post-award non-financial administration activities for sponsored research, training and other activities supporting an institutional annual award volume of approximately $561M. As an active member of the Federal Demonstration Partnership (FDP), Sara currently serves as Co-Chair of the Subaward Committee and is a member of the American Recovery and Reinvestment Act (ARRA) Subcommittee. Sara is an active member of both the the National Council of Research Administrators (NCURA) and is a frequent presenter at regional and national meetings in the areas of negotiation, staff training and development, ARRA and FFATA.

**Jeri Muniz** is the Executive Director for the Department of Contracts and Grants at the University of Southern California. As Executive Director, she is responsible for the overall management and administration of preand post-award non-financial services related to extramural proposals and awards. Jeri is an active member of the National Council of University Research Administrators (NCURA) and is currently Chair for Region VI (Western Region). Jeri is frequent presenter on such topics as subrecipient monitoring, working with industry, and strategies for successful negotiations.

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Learning Your ABCs: Adaptability, Balance and Culture

Peggy S. Lowry, NCURA Peer Review Program

Developing and maintaining your research administration operation is not unlike a child learning their ABCs. In both there are some “basics” that must be mastered and put in place. Then, there is the need to make continual adjustments to achieve the right outcome, a constant striving for stability amongst numerous expectations and new concepts, and a growing awareness for putting the pieces into a larger context.

And sometimes, just when you think that you have mastered your ABCs, you find others are speaking a new language and the cycle of learning and change begins again.

The cycle of change is inevitable and managing and incorporating change into our operations is an ongoing activity. Our challenge in research administration is how to step back from the day-to-day operation and objectively assess where change is needed.

There are numerous assessment techniques of processes or programs that can assist operations in identifying where change is needed. Techniques can be clustered around: self-assessment, constituent assessment of services, audits, and external assessments. Each cluster has multiple approaches and each contains some advantages and disadvantages.

This article will focus on some of the observations made from the reviews of sponsored program offices conducted during the last three years through the NCURA Peer Review Program, which falls within the cluster of external assessment of processes or programs. This particular assessment technique utilizes external experienced research administrators to perform an evaluation of the effectiveness of sponsored program administration. The observations made from the peer reviews represent three broad characteristics of effective operations: Adaptability, Balance, and Culture. These characteristics illustrate the range of struggles that sponsored programs confront in order to maintain effective operations.

Adaptability

The first broad characteristic evidenced through the NCURA peer reviews centers on adaptability. The effective sponsored program operation adjusts and changes in response to the rapidly occurring shifts that have surfaced in the last several decades. The dramatic increase in complexity of relationships, external oversight, and technology requires operations to be flexible in terms of maintaining operations while incorporating new requirements, regulations, and technology.

However, as seen in the majority of the NCURA peer reviews, flexibility and adaptability have been severely hampered by the lack of institutional resources pro-

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vided to research administration operations. Although research administrators have broadly recognized the increasing inability of resources to sustain operational needs and the accelerating high-pressure environment resulting in part from stressed infrastructure, it is an interesting phenomena to identify staffing and other resource investments to be so far behind many other institutional operational arenas. This result may reflect the historical adaptability and creativity of research administrators to manage and audit high risk areas to the point that resource needs do not have the same appearance of urgency as the needs of other institutional missions.

A few indicators identified through the review of operations that illustrate the inability to effectively support sponsored program administration include:

- not filling open positions, even when proposal and award volumes remain strong or have been increasing
- not providing “additional” resources when warranted, even though management complexities are increasing and even in the midst of significantly increased and sustained volume
- utilizing manual and time-consuming processes rather than investment in technology
- moving critical sponsored program functions outward to college, school, department or PIs, as a measure to conserve resources, without corresponding training
- lack of clear involvement from senior leadership in carrying the sponsored program message and expectations to the faculty

For many institutions, the peer review process provides a way of highlighting to senior leadership how resource constraints create risk, demoralize staff, and ultimately create impediments to faculty successes in extramural funding.

**Balance**

The second broad characteristic identified through the peer review process relates to balance. Effective operations are able to maintain their focus on facilitating research in an environment of shifting funding, sponsor requirements, and institutional priorities. Increases in research funding, especially rapid growth, tends to highlight the need for coordination of many specialized areas within the institution. Two are highlighted below:

a) As proposal volume and research funding increases at institutions, many operations begin to evolve into areas of specialization for staff. Beyond the traditional preand post-award specialization, operations begin to focus staff in specific areas such as funding information support, proposal development, contracting, or export controls or to expand their partnerships with college-level staff support. Often the needs of the faculty and priorities for the institution determine some direction, such as a priority for increasing funding may drive a need for more specialization in funding information support. Or faculty needs in contracting may suggest more attention and expertise in contracting and
negotiation skills.

b) As research funding increases, often a parallel need arises to better integrate the many business and functional silos within the organization or operation to be more responsive to researchers needs. Management of the additional requirements associated with external funding, and in particular Federal funding, often requires engagement of many institutional offices. These offices may be unaccustomed to dealing with such administrative requirements or the unique needs of managing “research.” Some examples include human resources, purchasing, or travel.

Many of the peer reviews suggest that growth in funding and the resulting increased research needs creates an imbalance between specialized institutional functions. Often, institutions struggle to balance fragmentation in two significant areas: a) adding specialization of sponsored programs expertise that is increasingly needed and inherent with a growing research enterprise and b) working across organizational silos within the organization. Adding or building specialization within the sponsored program operation results in more “moving parts” that require coordination and greater attention to communication. Business silos that are independently effective, now need to address the time-sensitive demands that come with research funding and become more nimble in moving through their review and approval processes (such as hiring personnel for externally funded projects).

A few indicators identified through the peer review of operations that illustrate fragmentation include:

◆ faculty complaints over delays in business functions, such as hiring personnel or purchasing goods or equipment on grants or contracts
◆ faculty complaints over delays in processing research-related agreements
◆ disconnects in research administration process between department or college and central staff, evidenced through complaints and confusion voiced by everybody
◆ lack of mechanisms for sponsored program operations to “hear” the faculty “voice” and use that as an indicator of changing or emerging needs
◆ scarce or no communication between offices or people, even when located in close proximity
◆ meetings of office or operations leadership at the top, but no commensurate meetings of operational staffs

The peer review process allows the external “expert” the opportunity to illustrate areas of imbalance and to help the institution or the program identify where fragmentation needs attention.

Culture
The third broad characteristic found in effective operations is understanding the multiple cultures within which sponsored programs operate. Every institution has a number of cultures, each with a unique set of expectations, needs, and priorities.
Three key stakeholder cultures include the faculty, the senior institutional leadership, and the sponsored programs administration.

Faculty Culture
The faculty drives research successes. They balance their investment in writing proposals and conducting their research activities with teaching, student advising, laboratory management, publication, service commitments to the institution, professional engagements, and other activities as they are called upon by the institution or their profession. The faculty responds to the priorities set by their academic leadership. Faculty work as best they can within the sponsored program policies and procedures; although their entrepreneurial outlook often predisposes them to be creative when interpreting and following policy.

Senior Institutional Leadership Culture
The senior institutional leadership establishes expectations related to research, the research agenda, and the message to the internal and external communities concerning research discovery. They balance research with academic and other institutional priorities and budget needs. They must be responsive to faculty issues brought forward. They must look broadly at institutional needs—across student, faculty, business and administrative arenas and balance needs with operating budgets and future directions.

Sponsored Programs Administration Culture
Sponsored program operations supports faculty in their pursuit of external funding. Their policies and procedures reflect good stewardship and accountability of sponsor support and awareness of state and federal rules and regulations. The sponsored programs staff is responsive to institutional priorities and directions established by senior leadership. They are responsive to the needs of the funding agencies. They fix problems. They meet deadlines. They enforce policy. They work in a constant pressure-driven environment.

All of these cultures intersect when the institution embraces external funding and even more so when there are institutional priorities to grow the research enterprise. Not surprisingly, as new and increased pressures have come to each of these stakeholder groups, the different cultures’ expectations, needs, and priorities are not always well understood by each other. At many institutions, the peer review process suggests that these cultures are clashing to the point that there is widespread distrust, increased risk, and at times loss of funding.

A few indicators identified through the peer review of operations that illustrate when there is disharmony between cultures include:

◆ faculty choosing to run awards through collaborators or affiliated entities rather than their prime institution, or stopping their efforts toward identifying new external funding altogether
◆ central research administrative staff not understanding, or wanting to acknowledge, the range of pressures and commitments confronting faculty
- faculty that have little understanding or interest in understanding institutional fiscal realities
- expectations that sponsored programs is the primary driver of increased funding
- assumptions that faculty and senior institutional leadership are as well connected and well versed in the details of research administration (sponsor policies and requirements) as they are in their other professional responsibilities
- central sponsored programs leadership and staff who conduct all assistance via e-mail with little recognition of the value of live, personal contact with faculty and their peers in other institutional offices

The peer review often initiates the process of bringing these different perspectives to the table. This process often engages stakeholders in a form of communication that highlights the shared goals of all stakeholder groups and acknowledges where the cultures need to be better merged.

**The Language of Effective Operations**

There are many characteristics that reflect effective sponsored program operations. The three broad characteristics highlighted in this article in some ways represent the highly pressurized environment that confronts our faculty, our institution, and our operations and the challenges to maintain effectiveness throughout the change process.

The common theme found in each of the three areas—adaptability, balance, culture—is that there is a partnership within each institution that supports and nurtures the research enterprise. The care and feeding of that partnership requires attention at both an operational and a leadership level as well as a form of communication that enables the partners to understand and contribute to addressing fractures and strengthening the shared goals between them.

As stated at the outset, the challenge in research administration is how to step back from the day-to-day operation and objectively assess where change is needed. Much like learning our ABCs, each operation needs to identify the “language” of its own environment. Incorporating a set of techniques that will help us monitor when the language is changing will allow us to shift with these changes and continue to do what research administrators do best: provide responsible service and support to our faculty, our institutions, and our sponsors.

**About the Author**

**Peggy S. Lowry** serves as Program Coordinator for the NCURA Peer Review Program. She has a 38-year career in research administration, spanning research and predominantly undergraduate universities. Her responsibilities included oversight for pre-award and non-financial research compliance. Peggy has given over 200 national, regional and local presentations and workshops and served on numerous national NCURA committees and twice served on their Board of Directors.
3920.4 Research Administration Metrics: Making Your Numbers Tell the Right Story
Martin Smith, George Washington University, and Andres Chan, University of Southern California

Numbers alone have little to no meaning unless they are evaluated in a proper context. Does 4% mean more or less than 87%? If the context is change in F&A cost recovery and 4% represents an overall increase and 87% represents a decline in awards with no F&A recovery, then they are both meaningful in a positive way. The number $0.00 could mean something negative if it represents a zero dollar growth in research, but could mean something more significant if it represents a variance between a research dollar goal and actual research dollars brought in. Numbers are objective in that they have a finite value; however, when or how we assign a context to those numbers may place more subjectivity on their relevance.

We want to introduce you to how we stumbled on how a statistical revolution in professional baseball called Sabermetrics, which is generally defined as “the search for objective knowledge about baseball” and “the mathematical and statistical analysis of baseball.” What does this mean? Very simply put, it means numbers of home runs or strikeouts alone do not determine whether your favorite star player is better or worse than my star player. To illustrate will require us to digress from research administration just a little to share a story we hope many of you can relate to.

We worked together at a consulting firm and when traveling to the home office outside of Chicago, we would often meet up for dinner and talk about something other than research administration—but of course, not for long. Martin is from Philadelphia, Pennsylvania—home of the Philadelphia Phillies and Andres is from Los Angeles, California—home of the Los Angeles Dodgers. Both teams are not natural rivals being on separate coasts in different divisions. However, the summer of 2008 was a good baseball year for both the Phillies and Dodgers. That year, Andres’ Dodgers acquired Manny Ramirez, a future Hall of Famer with great statistics, while Martin’s Phillies acquired Matt Stairs, somewhat of a journeyman player at the end of his career with far less stellar statistics. It turned out that the celebrated acquisition of Ramirez helped the Dodgers make the playoffs. However, the Phillies also made the playoffs and with the help of Stairs in a key playoff game against the Dodgers propelled the Phillies to an unlikely win en route to the World Series.

During that series, the Phillies’ Stairs had only 1 at bat, where he hit a homerun.

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1 This article is reprinted from the NCURA Magazine, May/June 2011, Volume XLIII, No. 3. It is used with permission of the publisher.
3 Chen, Albert, Stairs’ home run moves Phillies within a victory of World Series, Sports Illustrated, October 14, 2008, found online at http://sportsillustrated.cnn.com/2008/writers/albert_chen/10/14/phillies.dodgers.game4/
that drove in 2 runs. Meanwhile, Ramirez had 15 at bats, with 7 hits, 2 home runs, scored 4 runs, and batted in 7 runs. Who had the better series? From a numbers standpoint, it was the Dodger’s Ramirez. Using the more objective Sabermetrics criteria, it was the Phillies’ Stairs with his sole at bat in one game during the series that made a more significant impact.

How does this relate to research administration? Well if your institution recruits a renowned, well-funded faculty member will this mean your research base will be more fruitful than had it recruited 3 junior faculty members in promising areas of science? How about from a compliance standpoint; would a cost transfer performed 12 days after the original transaction occurred be more compliant than a cost transfer performed 89 days after the original transaction occurred? What if the 12-day cost transfer happened 45 days after the award ended, which would have meant the original transaction also posted after the award ended.

The purpose of this article will help you think about using Sabermetrics techniques to analyze different types of research administration metrics for more objective and subsequently meaningful results. Using a secondary variance analysis will be a key component to achieving more meaningful analysis from those metrics.

**Performance Metrics**

A common question asked this time of year as institutions that close on June 30th are completing performance reviews, self-assessments, and analyzing whether goals were met will ask “how did we do?” This is a simple yet oftentimes difficult question to answer. If you work in a Post-Award office, you know you submitted numerous invoices, drew-down from letters of credit, processed more cost transfers than you would have preferred, and engaged in countless debates that usually begin with “well, it depends...” but still struggle with what are good performance metrics?

Performance metrics should be captured to identify areas of concern to build improvement in those areas. For example, if your accounts receivables are aging well over 180 days then your institution may be interested in creating performance metrics to manage its way into improved accounts receivable numbers. Creating a simple schedule (see Figure 3920.4-1) to breakdown the A/R portfolio could provide some meaningful, objective information to start analyzing why the collections are taking so long for cash to come in.

In this example, the Average Days Outstanding metric is only 55 days where $3.5M of the $31M portfolio is outstanding. The outstanding amount represents 11.29% of the portfolio ($3.5M / $31M). The anomaly in this case that is driving the higher Average Days Outstanding metric seems to be related to State and Local Government sponsors.

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4 Matt Stairs’ career playoff statistics found online at http://www.baseball-reference.com/players/s/stairma01.shtml
5 Manny Ramirez’s career playoff statistics found online at http://www.baseball-reference.com/players/r/ramirma02.shtml
Another metric to use for a Secondary Variance Analysis would be Days Variance from Mean. This is the variance between the Average Days Outstanding for each sponsor type (Figure 3920.4-1, last column) compared to the weighted Average Days Outstanding for the entire portfolio (55 days). This secondary variance analysis will tell you a different story to help you fine-tune your analysis.

In this second case, your federal sponsors are paying you 30 days better than average, with industry sponsors coming in next at 13 days better than the average for your portfolio. Management could respond by focusing collection efforts on the state and local government sponsors and foundation sponsors to improve the overall metrics. This analysis, with subsequent prescribed actions to improve collections, may translate into an improved cash position for your institution.

Performance metrics could be used for anything ranging from award set-ups, to closeouts, to analyzing number of transactions processed. Adding a secondary variance analysis, similar to the last column in Figure 3920.4-1, will enhance the analysis. Also, preparing this type of table for a series of periods (e.g. months in a fiscal year, or fiscal year over fiscal year) will add a trend dimension where improvement can be tracked over time. If the numbers spike up in one fiscal year, that could have corresponded with a system enhancement or some other major obstacle that delayed invoicing and skewed the numbers. Be sure to bring in outside factors when analyzing the metrics so your results tell a proper story.

**Compliance Metrics**

Mitigating financial compliance risks is simple to do when transactions are analyzed using proper metrics, including a secondary variance analysis. Any auditor can tell you there are numerous ways to find financial transactions that stick out so much that you should be able to catch them before your auditors do. Approaches range from analyzing spending patterns on different types of awards to looking at content-specific metrics for effort reporting, cost transfers, and direct-charging of administrative costs.

Typical award spending may look like the graph in Figure 3920.4-2, where expenditures are slow to start as new staff come on board and project work then increases as the project ramps up. However, if award spending occurs so late into the project this may be a red flag that is indicative of other project risks (see Figure 3920.4-2).

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**Figure 3920.4-1: Sample Performance Metrics to Analyze Accounts Receivable:**

<table>
<thead>
<tr>
<th>Sponsor Type</th>
<th>Award Expenditures</th>
<th>Collected</th>
<th>Outstanding</th>
<th>Average Days Outstanding</th>
<th>Days Variance from Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Federal</td>
<td>$15,000,000</td>
<td>$14,500,000</td>
<td>$500,000</td>
<td>25</td>
<td>(30)</td>
</tr>
<tr>
<td>State and Local Governments</td>
<td>$4,000,000</td>
<td>$3,000,000</td>
<td>$1,000,000</td>
<td>81</td>
<td>26</td>
</tr>
<tr>
<td>Foundations</td>
<td>$2,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
<td>58</td>
<td>3</td>
</tr>
<tr>
<td>Industry Sponsors</td>
<td>$10,000,000</td>
<td>$9,000,000</td>
<td>$1,000,000</td>
<td>42</td>
<td>(13)</td>
</tr>
<tr>
<td>Totals</td>
<td>$31,000,000</td>
<td>$27,500,000</td>
<td>$3,500,000</td>
<td>55</td>
<td>0</td>
</tr>
</tbody>
</table>
3920.4-3). Plotting these trends is very simple to do using award expenditure data by high-level object code categories. A program such as Microsoft Excel will allow you to create charts with ease. Similar to the discussion earlier, be sure to choose multiple periods of time (e.g. fiscal months) to ensure reliable trending data.

Some other tips and tricks to use when analyzing spending patterns include:
1. Prepare Common-Size Statements by representing each MTDC or TDC Category as a percentage of TDC; compare variances between different awards
2. Exclude unique awards that will skew data (training grants, equipment grants, and multi-site cooperative agreements)
3. Perform analysis by sponsor types and group by award types for similar awards to compare to one another
4. Never jump to conclusions—find the trends and ask the question of the PI and/or Department Administrator to learn the story behind the trend

Another good financial compliance area to deploy objective metrics would be with evaluating cost transfers. As we mentioned earlier, there appears to be a focus on the timeliness of the cost transfer (i.e. within 90-days); however, competing circumstances may be ignored. Consider whether other underlying circumstances are driving the reason for the cost transfer.
Questions to ask include:

1. Was the award being charged set-up late?
2. Should a pre-award spending account have been established?
3. Is the award that will be debited ending soon?
4. Was the transaction initially denied, charged to another award, and now coming back for a second chance via cost transfer?
5. Is the award that will be credited overspent?

Assume your institution defines cost transfer discovery-date as the month-end date from when a transaction occurs. Using timeliness criteria alone may make many institutions more comfortable to approve cost transfers when occur within 90 days of month-end of the original charge. Using data presented in Figure 3920.4-4, this would mean transactions #1, 2, 4 & 5 would be acceptable and transactions #3 & 6 would be risky. Bringing in a secondary variance for criteria such as Days from Award End-Date provides another dimension where transactions #1 and 4 would be just as risky as those where the timeliness standard was used alone.

There are other criteria that could be pulled into your metrics to tell different stories. For example, adding a column to know whether the principal investigator (PI) approved the original transaction would be helpful to establish how allocability of the original charge was determined. The best part about constructing objective metrics and associated secondary variances is that there are multiple approaches without a wrong way to do it.

Looking at direct charging of salaries is another area where we can use these types of analyses. Normally one would focus their activities to job titles containing the more common administrative functions. Those with keywords of administration, administrator, clerical, admin staff, etc. While those job titles should be included in your routine analysis there are others that may need a closer look-at. While job titles vary by institution, look for those where you believe additional review may be needed.

In Figure 3920.4-5 for instance, there is a series of “Program” title codes. While most of the salaries for these job titles are paid by non-sponsored funds, additional
focus should be made to the individuals being paid from sponsored funds. Depending on how many individuals fall into that category, you may choose to sample all or some transaction, and conduct interviews with the staff to determine their actual duties. You may discover the individuals who are paid from sponsored funds are actually performing administrative duties such as proposal preparation, grant management and other administrative functions. If these employees are paid 100% by sponsored funds and the accounts do not meet the criteria of a “Major Project” then you may have a compliance risk.

**Figure 3920.4-5: Sample of Job Codes and Salary Distribution of Sponsored/Non-Sponsored Funds**

<table>
<thead>
<tr>
<th>Job Code</th>
<th>Description</th>
<th>Non-Sponsored</th>
<th>Sponsored</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>111019</td>
<td>Administrative Assistant I</td>
<td>$3,141,524</td>
<td>$200,510</td>
<td>$3,342,034</td>
</tr>
<tr>
<td>111020</td>
<td>Administrative Assistant II</td>
<td>$5,187,644</td>
<td>$683,486</td>
<td>$5,871,130</td>
</tr>
<tr>
<td>133131</td>
<td>Contract and Compliance Administrator</td>
<td>$66,000</td>
<td>$0</td>
<td>$66,000</td>
</tr>
<tr>
<td>113516</td>
<td>Department Business Administrator</td>
<td>$17,951</td>
<td>$0</td>
<td>$17,951</td>
</tr>
<tr>
<td>135012</td>
<td>Project Specialist-Administrator</td>
<td>$1,442,655</td>
<td>$1,420,229</td>
<td>$2,862,884</td>
</tr>
<tr>
<td>133015</td>
<td>Program Manager</td>
<td>$6,114,821</td>
<td>$1,151,461</td>
<td>$7,266,282</td>
</tr>
<tr>
<td>133011</td>
<td>Program Specialist</td>
<td>$3,181,098</td>
<td>$888,985</td>
<td>$4,070,083</td>
</tr>
<tr>
<td>133007</td>
<td>Program Assistant</td>
<td>$676,430</td>
<td>$350,197</td>
<td>$1,026,627</td>
</tr>
</tbody>
</table>

**Conclusion**

Whichever approach your institution takes to performance metrics—be sure to analyze whether your numbers are telling the right story. This can be accomplished through a variety of approaches including using more objective criteria, considering other circumstances, or calculating a secondary variance. Remember the numbers only tell enough of a story to send you down a better path to ask the right questions in order to resolve performance issues or mitigate financial compliance risks. Diligence in the follow-up actions to those metrics will yield the best results.

**About the Authors**

**Martin Smith** recently joined The George Washington University as the Associate Director for Strategy and Compliance, in the Office of Grant and Contract Accounting Services. Martin earned an M.B.A. in Finance from La Salle University, and a B.B.A. in Accounting from Temple University. Martin has 9 years of research administration experience working directly for higher education institutions in financial compliance, finance, and post-award roles; and as a consultant performing compliance risk assessments and effort reporting system implementations.

**Andres Chan** is a Senior Manager at the Office of Financial Analysis at the University of Southern California. He has over 11 years of experience in post award administration with primary focus on Indirect Costs, Space Studies, Recharge Centers and A-21 compliance issues. He has also worked as a consultant for 2 years with MAXI-
MUS where he was responsible for preparing and negotiating F&A proposals along
with numerous costs analyses projects including space surveys, along with compli-
ance and cost reviews of Recharge Centers. Prior to that, he worked for 7 years at
the California Institute of Technology under similar roles.
Benchmarking
Tim Patterson, Zach Belton, and Marisa Zuskar, Huron Consulting Group

Let’s assume you have finished your weekly grocery shopping and are making your way to the front of the store to pay. As you evaluate whether to enter lane #2 or #4, one factor for consideration may be the number of individuals in line ahead of you. Lane #2 may have two people, each with only a few items to purchase, while Lane #4 only has one person, but with an overflowing shopping cart. Which lane do you go to? Don’t look now, but you are benchmarking. You are using available data – the number of customers with items in front of you and your past experience with visiting the store – to make a management decision, i.e., do I go left or right?

Benchmarking is assessing a measurement against a point of reference. It is the process of comparing one’s processes and performance metrics to industry standards or best practices and evaluating the results. Benchmarking can be an internal analysis of your institution or an external review of peer institutions, or both. Internal and external benchmarking have distinct and complementary benefits. Internal benchmarking provides a good method for calibrating performance within the parameters of a common system, while external benchmarking provides insight into how performance may differ from peers.

In the grocery store example, you made a decision about the fastest line based on an internal comparison of the available options at the store. Perhaps you opted for the slower line so that you would have time to mull over a gum purchase or compare your NCAA basketball bracket to the editor’s picks in a popular sports magazine, but at least you had the information necessary to make an informed decision. You might also make an external comparison that another nearby grocery store is typically less crowded overall, which may influence your future shopping choices.

Defining the Performance Metrics
Whether you have identified a targeted area for improvement or sense a general need for improvement, it is beneficial to first map your operational landscape to clearly visualize how processes are related. This will help identify factors that should be improved. For instance, accounts receivable balances may be overly delinquent, but that performance issue may be directly tied to resource allocation issues in another area, such as financial reporting.

To begin, you should create an inventory of key tasks performed by your office and other core responsibilities. In a post-award office, some activities may be based on recurring monthly or annual cycles that adhere to sponsor-driven due dates, like billing, financial reporting, or effort reporting. Other associated tasks that are equally important, but not tied to a specific cycle time, may include providing customer service (help desk support), award set-up, accounts receivable management, expenditure review and approval, budget or overdraft monitoring, etc.

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Next, determine what to measure, the reasons for measurement, and the basis for comparison. How will the data be used and how will you establish priorities? Your focus may be based on historic customer service feedback, cost (both dollar value and opportunity costs), risk assessment, audit findings, available resources, etc.

Once you have metrics, you can establish a target goals and service level expectations, which will help promote delivery of consistent and reliable service. This provides a baseline to review past performance, for recurring comparisons with other units, evaluation of key cycle times, and an approach to managing compliance risk.

As an example, if the number of award set-ups were to increase by 25 percent, what would the measurable impact be on the process or the individuals assigned to support the process? Perhaps the influx in award set-up requests uncovers workflow issues that lead to a longer cycle time. Without benchmarking, this may not be uncovered, understood, or worse yet, not proactively managed.

Internal Benchmarking

Internal benchmarking requires making comparisons within your institution, either across similar functions or for a single unit over a period of time. These comparisons can be useful to establish a reasonable norm under existing operations. For instance, you may be able to determine that most departments, on average, process grant approvals within a two-day period. Depending on its reasonableness, this two-day measurement might then set the standard for performance goals and expectations across all departments. In the case of a post-award office, there is no other “like-unit” at your institution. The only valid comparison is a snapshot of the same office from a week, month, or a year ago.

Internal benchmarking is the best way to compare performance across a standard baseline for institutional operations. Comparisons within an institution allow for perspective under a common set of policy constraints, level of centralization, degree of risk tolerance and overall research culture. To understand the baseline, it is helpful to first see the picture without variations.

Another benefit of internal benchmarking is that the metric definition and measurement techniques can be institutionally driven. When examining your own operations, you have the ability to define what metrics should be and how they will be collected. The only limits are the time and resources required to collect the data.

A few common examples of metrics gathered for internal benchmarking purposes are below:

<table>
<thead>
<tr>
<th>Volume and Productivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>◆ Number of proposals</td>
</tr>
<tr>
<td>◆ Number of active awards</td>
</tr>
<tr>
<td>◆ Anticipated billing</td>
</tr>
<tr>
<td>◆ Actual billing</td>
</tr>
</tbody>
</table>
Many institutions are striving for “best practices,” but may not have taken time to define what that means. Some might describe “best practices” as finding the desired balance between operational costs, financial and compliance risk, high quality customer support, and streamlined and efficient work products. Others might focus more heavily on processing time or maximizing resources.

External benchmarking is a structured process of identifying those “best practices” by comparing one organization’s operations and performance metrics to that of other institutions. Whereas, internal benchmarking is useful to better understand relative performance within your current structure, external benchmarking can provide insight on how improved performance is achieved in a differently structured system. Internal benchmarking is the first step to establish your baseline of improvement opportunities; external benchmarking is the calibration step to identify best practice possibilities.

A key point to remember is that what works for one institution may not automatically work for another, but using metrics to compare performance can help to identify the areas where the potential for greatest improvement exists. Benchmarking allows an institution to understand what is attainable.

When making external comparisons, the good news is that many of the core processes of research administration are largely consistent; while responsibilities and workflow may vary slightly, most institutions have processes in place for

- Number of financial reports
- A/R by date range (30, 60, 90, 120, etc)
- A/R by sponsor
- A/R by department or PI

**Cycle Times**
- Average number of days to review and submit a proposal
- Average number of days to issue a subaward
- Average number of days to set up an award in the system
- Average number of days to complete billing/invoicing requirements

**Compliance Considerations**
- Number of financial reports submitted late
- Number of late cost transfers
- Number of late effort reports
proposal submission, award set-up, financial reporting, award closeout, etc. Each of
those processes have the same basic steps. For example, proposal submission almost
always involves reviewing a proposal for RFP requirements, reviewing a budget for
institutional consistency, verifying COI disclosures and routing a proposal for some
level of institutional approval and sign off.

Choose Your Peers Wisely
Choosing the right institutions for comparison is an essential component of external
benchmarking. As a rule, benchmarking should reveal the differences and opportu-
nities in processes not reflect the differences in the type of institution. For instance,
say you wanted to understand what staffing is optimal for a post award office. For
that analysis, an institution with $10 million in annual research awards would not
compare favorably to an institution with $300 million in annual research awards.
The infrastructure needs and varied economies of scale introduce too many differ-
ences to make a fair comparison.

In addition to research volume, a few of the other key factors for consideration
when defining an appropriate peer class include similar research portfolios, schools
or colleges within a university, institution type (public, private, research foundation,
hospital, university), system affiliation, and geographical region. Although it is not
necessary or likely even possible to align all of these factors, the goal should be to
choose the closest comparison. Also consider identifying aspirational peers to find
areas where enhancement opportunities exist, which will help establish manage-
ment goals for your institution.

Obtaining Value from Benchmarks
After you have chosen your metrics, selected your peers and collected the bench-
marking data, it is important to perform additional due diligence. Understanding
the underlying causes for variances in your data is truly the key to discovering best
practices. For example, a peer institution may process contracts in an average of 30
days, whereas your institution might require three months. Before you impose that
standard on your office, you should seek answers to a few follow-up questions,
such as:
1. Are the start and end points of the peer metric consistent with my metric?
2. Does this peer require fewer approval steps in its review?
3. How many contract administrators does the peer’s office employ?

   Based on the answers to these questions, the required action could be as simple
   as adjusting your benchmarking metrics or as complex as realigning your resources
   and processes. Benchmarking data raises the question, but should only be the start-
ing point for discussion.

Get Into the Game
Internal and external benchmarking, by way of cross-unit comparisons, reviewing
against historic averages, and evaluating performance against peers, helps to insure
institutions are well equipped to set attainable performance goals and proactively
manage portfolios and make important management decisions to attain these goals. Rather than guess or hope, institutions are able to use fact based data and metrics to set goals, establish service level expectations, and calibrate desired performance.

Those analytical skills you have been practicing at the grocery store can now be put to good use, provided you are able to find an appropriate balance between the value gained by having data available to make and support management decisions and the cost of gathering the data in the first place. By paying close attention to the areas you wish to focus on and by prioritizing your efforts, you will find yourself off the bench and in the game. Good luck!

About the Authors

Tim Patterson is a Senior Director in the Higher Education and Life Sciences practice at Huron Consulting Group. Tim has close to 18 years of experience working in areas such as university operations and research administration with an emphasis on grant and contact administration, compliance with cost accounting standards, operational improvement, training development, and audit resolution. He has presented a number of regional and national NCURA conferences. Tim can be reached at tpatterson@huronconsultinggroup.com.

Zach Belton is a Director in the Higher Education and Life Sciences practice at Huron Consulting Group. Zach has dedicated over 12 years to assisting clients better understand their research enterprises through assessment, metrics and benchmarking. He is also a frequent presenter at regional and national NCURA conferences. Zach can be reached at zbelton@huronconsultinggroup.com.

Marisa Zuskar, a Manager in Huron’s Higher Education practice, has spent the majority of her career focusing on operational and performance improvement at research institutions. She has designed operational, performance, and compliance management metrics and reports allowing institutional leadership to monitor operations. She has extensive experience using metrics to identify opportunities to increase the efficiency and effectiveness of sponsored projects administration. Marisa can be reached at mzuskar@huronconsultinggroup.com.
Enhancing Research Administration: From Targeted Improvements to Wholesale Transformation

Cathy Snyder, Vanderbilt University; Matthew Staman, Rick Rohrbach, and Joe Taylor, Huron Consulting Group

Introduction

For time-starved research administrators (RAs), efforts at making lasting changes in day-to-day operations are often tied to “special projects” related to compliance issues, implementing new information systems, or the ramping up that occurs from winning a large grant, hiring a new faculty member, or responding to faculty complaints. The efforts toward improvement are well-intended, but too often focus on incremental change in targeted areas which can result in unfortunate consequences such as:

◆ Increased complexity and less efficient business processes
◆ Decline in communication and service levels
◆ Increase in FTEs and costs that could have been avoided or more limited
◆ Too much attention by the institution, faculty and/or staff on the “crisis issue” at the expense of focus and investment in other core service areas

Because of a confluence of events occurring in today’s research administration world, it is becoming apparent that RAs would benefit from focusing more on comprehensive transformation. A combination of external factors — most notably the decline in government support for research funding, the budget challenges facing private and public universities and health systems, and the changes related to the new healthcare reform law — have significantly increased pressures on research institutions. These pressures are beginning to stimulate dramatic change in the focus of the research enterprise at many organizations, and will likely demand more of RAs.

This article will address how RAs can best prepare for this evolution, balancing the traditions of academic cultures with the transformation efforts needed to meet the new pressures.

What is “Transformation?”

For the purposes of this article, transformation means a research enterprise-wide change that:

◆ Ensures tight alignment of investments, processes and incentives with the strategy and goals of the institution;
◆ Balances service, efficiency, and compliance;
◆ Motivates employees to surpass their own interests and direct themselves to the interests of the institution; and

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Significantly raises the level of performance and allows the organization to respond to threats and opportunities.

In practical terms, this will mean making more extensive and intensive changes which allow institutions to better respond to the pressures of the environment.

Management of the research enterprise will need to become more strategic especially in terms of resource allocation

Research administration processes will need to become more efficient to reduce costs

Research administration service will need to be more focused and nimble to support strategic plans and adjustments to the environment

RAs will be called upon to play an even greater role in providing information to institutional leaders to support effective decision making

**Transformation at Your Institution**

Successful transformation of the research enterprise will be highly dependent on leadership from the highest levels of the institution. Change is hard at any organization; at research institutions, with a tradition of shared governance, it is often very difficult. Institutions can and do respond to burning platforms. However, institutions now need to focus on developing and communicating more comprehensive plans for change that are tied to their mission and values to optimize progress and enhance results.

**Transformation Vision**

The essential elements of a transformation vision include a clear set of goals, guiding principles and an objective appraisal of the current state of a research organization’s operations. Guiding principles help articulate why the institution needs to make changes, what parameters and constraints must be observed, what the intended outcomes are, and how those outcomes support the research mission. Some guiding principles that might be considered include:

- Making the Principal Investigator (PI) your “true north” (e.g. what process/procedure changes are needed to meet their needs?)
- Balancing efficiency, responsiveness and compliance in developing business processes, rather than setting up separate “compliance” functions and processes
- Making information available to decision makers from research teams to Deans and VPs for Research (i.e., transparency and communication)
- Simplifying processes

As organizations develop a vision for transformation, they must also define a picture of what success will look like. This includes both qualitative statements about services to the research community and compliance, and whenever possible, quantitative goals related to efficiency and effectiveness. These key objectives then provide a basis against which success can be measured.
Current State Assessment
Understanding the current environment is also an essential element of the transfor-
mation: where is the organization today? This involves assessing all aspects of the
operation including business process, organizational structure, people, technology,
and performance measurement.

The scope of the current state assessment should be guided by the scope of the
overall effort which may include some or all research administration areas. Some of
the questions that should be considered in carrying out the assessment include:
◆ Business process: How many steps / handoffs are needed for each process? Is
compliance baked into the process or layered on as extra steps? Is the process
understood by customers in the research community?
◆ Organizational structure: Is the organization structured to promote effective
communications and provide good service? Do reporting lines impede
effectiveness?
◆ People: Are roles and responsibilities appropriate and widely understood? Are
the right people assigned to do each function and task? Are they qualified and
trained?
◆ Technology: Are there opportunities to better leverage technology? Is the same
information keyed into different information systems numerous times?
◆ Performance Measurement: Is information readily available to enable effective
decision making? Are there metrics in place to measure improvements and can
baseline measures be developed?

Developing a Planning Roadmap
The results from the current state assessment, along with the guiding principles, will
serve as a strong foundation from which research administration leaders can devel-
lop a roadmap for improvements that aligns with institutional priorities. The benefit
of developing a roadmap is that individual improvements can be implemented
over time while still focusing on the path to achieve the broader vision and goals.
For most institutions, comprehensive transformation will occur over an extended
period of time, but benefits in costs, effectiveness and PI satisfaction can be realized
throughout the process. In developing the roadmap for improvements, many ques-
tions should be considered:
◆ What are the opportunities for improvement? What are the priorities? Where will
the institution get the biggest bang for the buck, and what changes most align
with the guiding principles?
◆ What opportunities will have the greatest impact on reducing faculty burden?
◆ How should specific change efforts be sequenced? Considerations might include
priority, interdependencies, and the ability to achieve “quick wins” that build
support.
◆ What resources are or can be made available to the effort? Can a case be made to
invest short-term resources for a long term benefit?

◆ How should the overall effort be governed? How should the institution balance the cultural norms and values of shared governance with the need for potentially significant change?

**Communication**

Communication is vital in any transformation effort. Many initiatives face challenges because insufficient communication allows for confusion and frustration, which can lead to or increase resistance. Effective communication enables all stakeholders to engage effectively in the process.

◆ Regular leadership updates to the research community

◆ Creation and use of advisory committees of PIs and research personnel

◆ Forums with various stakeholder groups for insights and feedback

◆ Targeted updates to individuals most directly affected by changes

◆ Website / newsletter updates

**Implementing Changes**

Within the context of the comprehensive transformation, an institution is likely to carry out several individual projects in targeted areas – redesigning a set of related processes, developing a set of policies, rolling out training, implementing reporting tools and metrics, etc. – but each will be aligned such that it is contributing to the broader objectives. Each new project should have its own appropriately scaled project plan that lays out the work to be done, the resources assigned, the timeline and the objectives and expected benefits. As the plan is implemented the team will work together to design the changes and determine how to implement them. During this process, several steps can be taken to increase the likelihood of success and acceptance of change:

◆ Include advisory groups as appropriate in reviewing changes to be sure that they are clear and to gather suggestions for improvement.

◆ Whenever possible (often for systems, reporting and metrics and for new processes), conduct a pilot before full rollout. This allows for feedback and refinement before the entire research community is affected.

◆ Plan for adjustments through the rollout process as more information is learned.

◆ Incorporate metrics into processes where possible. This allows the organization to show progress against baseline metrics (from the current state assessment) and communicate

To optimize results, it is essential to have the right people leading the changes, and to have the right people in place to perform the new roles. An organization can have the most elegant plan, the right workflow and incentives, measurements for productivity and progress and still risk failure if the right leaders and teams are not in place and aligned.
Summary
Helping organizations react to a highly regulated and changing environment, while managing and supporting the routine activities, has always been a crucial role for RAs. This is becoming increasingly acute and difficult to balance, and as such, will force RAs to lead their institutions through larger scale changes that allow for enhanced efficiency, greater focus, quicker adaptations, and more data-driven decisions by key institution leaders. Several institutions are becoming increasingly proactive to prepare for the new environment. Don’t wait and fall behind – it is time to be prepared!

About the Authors
Cathy Snyder is Director, Office of Contract and Grant Accounting, Vanderbilt University. Matthew Staman, Rick Rohrbach, and Joe Taylor are Managing Directors at the Huron Consulting Group.


**Practical Tools**

This section includes practical tools — reports, flow charts, checklists, etc. — relating to internal and external communications. This material is culled from a variety of authoritative sources.

**Quick Checklist for Assessing OSP Services**

AIS editors

Please circle the number which best represents your opinion. If you have never used/accessed a particular service, please check the box next to “NA.”

*Scale:* 1 = strongly disagree 2 = somewhat disagree 3 = somewhat agree 4 = agree 5 = strongly agree

1. Materials provided by the Office of Sponsored Programs (OSP) are
   - Timely
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accessible
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accurate
     - 1
     - 2
     - 3
     - 4
     - 5
   - Helpful
     - 1
     - 2
     - 3
     - 4
     - 5
   □ NA

2. Responses by OSP staff to questions are
   - Timely
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accurate
     - 1
     - 2
     - 3
     - 4
     - 5
   - Helpful
     - 1
     - 2
     - 3
     - 4
     - 5
   □ NA

3. Personal assistance (e.g., help in proposal preparation) provided by OSP staff is generally
   - Timely
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accurate
     - 1
     - 2
     - 3
     - 4
     - 5
   - Helpful
     - 1
     - 2
     - 3
     - 4
     - 5
   - Courteous
     - 1
     - 2
     - 3
     - 4
     - 5
   □ NA

4. Training/information sessions provided by OSP are
   - Timely
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accessible
     - 1
     - 2
     - 3
     - 4
     - 5
   - Accurate
     - 1
     - 2
     - 3
     - 4
     - 5
   - Helpful
     - 1
     - 2
     - 3
     - 4
     - 5
   □ NA
5. The OSP Web site provides content that is
   - Timely 1 2 3 4 5
   - Comprehensive 1 2 3 4 5
   - Accurate 1 2 3 4 5
   - Well-organized/well-presented 1 2 3 4 5
   - Helpful 1 2 3 4 5
   □ NA

6. Financial reports provided regularly by the OSP are
   - Timely 1 2 3 4 5
   - Accessible 1 2 3 4 5
   - Accurate 1 2 3 4 5
   - Helpful 1 2 3 4 5
   □ NA

7. Other reports (nonfinancial) provided regularly by the OSP are
   - Timely 1 2 3 4 5
   - Accessible 1 2 3 4 5
   - Accurate 1 2 3 4 5
   - Helpful 1 2 3 4 5
   □ NA

8. Special reports provided upon request by the OSP are
   - Timely 1 2 3 4 5
   - Accessible 1 2 3 4 5
   - Accurate 1 2 3 4 5
   - Helpful 1 2 3 4 5
   □ NA

9. In general, OSP staff and services appropriately support the institution’s research mission 1 2 3 4 5

10. Do you have any suggestions for improving the effectiveness of the OSP? Are there services not now being provided (including training sessions, materials not now available online, etc.) that you would like the OSP to provide?
About you:

(1) How often do you access the information/services provided by the OSP? (check one)
   □ Daily       □ Weekly       □ Monthly       □ Less often than monthly

(2) Are you
   □ An administrator/administrative staff member       □ Faculty member       □ Other

Department (optional): ____________________________
Name (optional): _________________________________

Thank you.
Case Studies

Peer Reviews at the University of California, Merced: Part One
Peggy S. Lowry, NCURA Peer Review Program Manager

In recent years, institutions of higher education have paid increasing attention to implementation of formal processes for assessing research administration infrastructure. In some instances that process has been driven by assessment requirements established by the institution or state. In other instances institutions adopt these formal processes as an opportunity to have outside experts provide baseline operational data and benchmarks.

The following case study of the University of California, Merced (UC Merced) provides unique insight into an institution’s approach to assessing research administration operations and infrastructure and utilizing these assessments in their decision-making process. As the first new American research university established in the 21st century, UC Merced faces the same challenges as any existing research university, but must also deal with challenges around building and sustaining the research enterprise in an environment that has many characteristics more commonly found in a predominantly undergraduate or emerging research institution. As a new institution UC Merced faces unique challenges in meeting competing institutional priorities while creating a new research administration infrastructure from the ‘ground up.’

Throughout this challenging process of creating research administration infrastructure, UC Merced has retained a focus on forging the necessary partnerships between offices and stakeholders within the academic and administrative community. These stakeholders include the faculty and students engaged in extramurally funded research as well as staff and administrators involved in the administrative, business, and regulatory oversight functions that are necessary for good stewardship and protection of those sponsored activities.

This case study is intended to provide a deeper look at the challenges and lessons learned as an institution proceeds through multiple assessments and engages with their stakeholder groups in the change process. This case study continues the series of topics related to the NCURA Peer Review Program and the themes and impacts from the assessment process.

The Decision for External Review and the Preparation Process
Susan Carter, Director, Research Development Services, University of California, Merced; Autumn Salazar, Director of Contract and Grant Accounting, University of California, Merced; Thea Vicari, Director, Sponsored Projects Office, University of California, Merced

This is the first of a multi-part case study about the assessment and change process for the research administration infrastructure at the University of California, Merced (UC Merced). This first part focuses on the decision to engage external assessments:
how this decision was reached, who was involved, the timeliness of the reviews, and details of the preparation for the Peer Review Teams’ site visits. Subsequent parts of this case study will discuss how UC Merced evaluated the recommendations made by the reviewers; the ways in which the recommendations drove institutional change, including significant impacts on the budget process; the challenges faced during implementation; and the outcomes and on-going assessment.

**The University of California Merced: Our Story**

UC Merced is the newest and tenth campus in the prestigious University of California (UC) system and the first new American research university opened in the 21st century. The campus opened in 2005 and is located in the San Joaquin Valley, an under-resourced region with high poverty and unemployment rates compared to the rest of the state and the nation. UC Merced’s undergraduate enrollment as of Fall 2012 was approximately 5,700 students, with over 5,400 undergraduates. Planned growth will bring the total campus population to 10,000 students (20% graduate and professional) by the year 2020, with the expectation that enrollment will eventually reach 25,000 students. UC Merced is a doctoral granting research institution offering graduate programs across the full spectrum of academic disciplines. Currently the campus has three schools (School of Natural Sciences; School of Engineering, and School of Social Sciences, Humanities and the Arts) and two Organized Research Units (the Sierra Nevada Research Institute and the Health Sciences Research Institute).
The Beginnings of the Research Administration Infrastructure

Three offices currently play a distinct and important role in obtaining, maintaining, and overseeing extramural research funding support for the University: Research Development Services (RDS), Sponsored Projects Office (SPO), and Contracts and Grants Accounting (CGA). A fourth office, Academic Resource Center (ARC), was merged into the SPO operation. The current research administration structure evolved from initial models established at the outset of the University but which ceased to be as effective as the institution grew.

Research Development Services

Research Development Services (RDS) in the Office of Research was started by the Vice Chancellor for Research in 2008. The overall mission of RDS is to support the institutional capacity to pursue and obtain extramural funding for research initiatives. RDS services to faculty include identifying and disseminating information regarding funding opportunities; providing advice and assistance regarding responses to new, emerging, and changing funding opportunities and environments; identifying potential collaborators; providing training on proposal writing and grantsmanship; providing support for planning, coordination, and submission of research proposals; and proposal writing and editing. RDS also works with faculty to build effective relationships with extramural research funding agencies.

The Director of RDS has served in that capacity since the unit was founded. The Director was hired initially as a part time grant writer/proposal coordinator; however the duties of that position quickly expanded to that of RDS Director of a one-person (one FTE) office. An additional full time staff position was added in September 2011. Initially the RDS office focused primarily on providing support for the preparation and submission of large, multi-disciplinary, center-type proposals; over time this focus has been expanded to provide proposal development support and advice to faculty more generally. In the past three years the office has also emphasized training and support in proposal development for junior faculty, as the need for such support has increased in concert with overall campus growth.

Sponsored Projects Office

In 2002, the founding Vice Chancellor for Research (VCR) hired the founding Director of the Sponsored Projects Office (SPO) who remained a one person office for almost four years. In her initial year, which preceded the arrival of faculty, the Director of SPO spent most of her time establishing an identity for the campus by obtaining such items as DUNS, CAGE Codes, Employee Identification Number (EIN), establishment of an F&A rate, and registering with numerous sponsor’s electronic research administration systems. Also, in that initial year, the VCR and Director of SPO entered into an agreement with Lawrence Livermore National Laboratory to outsource the Institutional Review Board (IRB) and the Institutional Animal Care and Use Committee (IACUC) given that there was no UC Merced faculty quorum to serve on these compliance committees. The Research Compliance and Integrity Office, the Graduate Division, the Technology Transfer Office, and the Research Devel-
In its early days of the campus, SPO was responsible for assisting the faculty with proposal preparation, proposal submission, award transfers to UCM, and award acceptance to UCM. While SPO still performs some proposal development functions, it is anticipated that SPO will perform a traditional role of review and authorization of proposals and awards as the staffing levels in Research Development Services as well as in post-award services increases.

Contracts and Grants Accounting
Unlike SPO and RDS, the Contracts and Grants Accounting Office reports to the Controller’s Office. The grant accounting functions were performed within General Accounting by a senior accountant with knowledge of sponsored funding until the current Director of Contracts and Grants Accounting was hired in October 2007. CGA provides central office post-award support. The primary functions of CGA are award setup and appropriation in the financial system, issuing financial reports to sponsors, invoicing and collection of cash owed to the University, assistance with grant related audit coordination, compliance with all terms and conditions of the grant or contract including Effort Reporting requirements, campus-wide training and policy guidance, and financial closeout. CGA is also responsible for the development and maintenance of the faculty reporting system which provides faculty with real-time online access to their grant budgets and expenditures.

Academic Resource Center/Sponsored Projects Accounting
The day-to-day monitoring of the fiscal activities of the awards was initially managed by the Academic Resource Center (ARC); a centralized service center responsible for financial monitoring, travel, purchasing, and human resources. The number of staff within ARC remained stagnant even with a substantial increase in the number of faculty. In 2008, after six years, the ARC model was deemed to be unsustainable and was disbanded. Those staff who were responsible for the daily financial monitoring of contracts and grants were reassigned to report to the Director of SPO. In an effort to distinguish this new group from the established pre-award functions of SPO, it was called Sponsored Projects Accounting. This was a defining moment for research administration as faculty soon became confused about “who” did “what” as roles and responsibilities became blurred.

Discussion
The confusion created by the poorly coordinated dissolution of ARC was compounded by already existing confusion surrounding the difference between the post award services provided by ARC and those provided by Contracts and Grants Accounting (CGA). The faculty found themselves unsure of when they should interact with the post-award personnel in SPO (the reassigned ARC staff) or staff in CGA.

Much of the initial organizational structure that was put into place at UC Merced was intentionally designed to ‘make things happen’ and was geared towards attracting students to the nascent University. Building the research administration infra-
structure, by necessity, took a back seat to building the more basic infrastructural needs of the campus. In addition, the fiscal climate led to considerable challenges in the development of infrastructure to support the new University. As a result, the development of research administration infrastructure had not occurred as quickly as might have been expected given that it was modeled after established UC campuses.

The Decision for Assessment and the Charge to the Reviewers

The need for a self-assessment of UC Merced Research Development Services (RDS), Sponsored Projects Office (SPO), and Contracts and Grants Accounting (CGA) was driven by the required internal assessment policy implemented by the Senate Administration Council on Assessment (SACA). SACA implemented an annual and periodic review assessment process in 2011. It was expected that the results of Annual Assessment and Periodic Review would inform the planning, decision-making, and budgeting processes of units and/or divisions in a manner that reinforces evidence-based improvements in function and service. Self-assessments were conducted as an initial response to the Annual Assessment and Periodic Review requirement.

The self-assessment undertaken by SPO staff was conducted during January through June 2011. The self-assessment included data collection of staff time and effort reporting, proposal tracking, online survey collection, and proposal workflow mapping. Results from the survey underscored that respondents did not understand the distinct roles and responsibilities of the three central offices; rather viewed these three offices as one collective body. In part, this lack of clarity was due to the overwhelming number of assistant professors who did not have prior university experience; an additional challenge at UC Merced. CGA, along with the other units under the Vice Chancellor for Administration, was evaluated in a series of campus customer service surveys. These surveys focused on the services provided by CGA and how the campus as a whole felt about the delivery of those services. This information was not made available publicly but was shared between the Directors of CGA and SPO. The most significant finding from the customer service survey’s for CGA was that much of the campus did not understand the difference between CGA and SPO.

RDS conducted a similar self-assessment process between September 2011 and June 2012. Self-assessment activities undertaken by RDS included a self-assessment
document outlining the history and achievements of the unit, written in conjunction with the UC Merced Internal Assessment Coordinator. The self-assessment process also included a customer satisfaction survey sent to all UC Merced faculty by the Office of Institutional Planning and Analysis. The purpose of the survey was to gather information about faculty awareness of RDS services and satisfaction levels. Similar to the surveys conducted by SPO and CGA, these surveys revealed that there was considerable confusion among faculty regarding the relative roles of RDS and SPO in proposal development, as well as widely varying experiences in terms of satisfaction with research administration services.

Following the self-assessment and as part of the overall assessment process, an external evaluation of SPO and CGA was conducted at the request of Samuel J. Traina, Vice Chancellor for Research and Mary Miller, Vice Chancellor for Administration. An external evaluation for RDS was conducted at the request of Dr. Traina. The evaluations were performed in the spring of 2012 by a Peer Review Team from the National Council of University Research Administrators (NCURA) for SPO and CGA and in the summer of 2012 by a Peer Review Team from the National Organization of Research Development Professionals (NORDP) for RDS.

The University asked the review teams to evaluate the following:

◆ The research environment at UC Merced;
◆ The staffing levels within the offices;
◆ Whether it was feasible to continue with central post-award administration versus having the functions performed at the local level (within research institutes and Schools);
◆ The relationship between SPO and the Schools;
◆ The relationship between SPO and CGA;
◆ The effectiveness of RDS and interactions with key stakeholders; and
◆ The ability of RDS to contribute to the strategic research goals of the organization.

Although the external evaluations covered a broad range of areas, these particular areas of emphasis were chosen based on the results of both the self assessments and the customer surveys, including the apparent faculty frustration brought about by the confusion around roles and responsibilities. In addition, the staff in the three central offices confirmed that many of the challenges they faced in their day to day work was the result of one of the areas to be reviewed by the external reviewers. In retrospect, the decision to review these areas was critically important; it would have been difficult to institute some of the changes needed to grow the research enterprise without the existence of an independent review of operations by organizations with no political stake in the outcome.

**Preparing Background Materials for the Reviewers**

Beginning in November 2011, the Director of SPO compiled a Briefing Book for the NCURA Peer Review Team; a process that took five months to complete. The Briefing Book compiled background materials (policies, procedures, organizational and
staffing details) for the review team and utilized some information from the self-assessments. The completion of this Briefing Book required cross-campus coordination and included information drawn from RDS, SPO, CGA, Institutional Planning and Analysis, Purchasing, Environmental Health and Safety, and the Research Compliance Office. The final product was 739 pages and contained the campus’ vision statement, demographics, profiles of faculty population, and the manual practices and procedures for research administration in light of the fact that there was no electronic research administration system.

RDS also prepared briefing background materials for the NORDP review; materials were shared via a ‘cloud’ based private website available to the NORDP review Team. Documents shared with the review team included Annual Reports from the RDS office, job descriptions for all RDS staff, copies of the UC Merced and Office of Research Strategic Plans, Training Agendas and participant evaluations from RDS-sponsored training sessions and workshops, Reports on Proposals and Awards on a fiscal year basis between 2008 and 2012, information on the institution’s Organized Research Units, and a copy of the self assessment of the RDS unit completed by its Director with assistance from the UC Merced Assessment Coordinator. This self-assessment included a copy of the faculty survey on RDS services that was conducted in fall, 2011. The NORDP Peer Review Team also reviewed and considered all public documents related to research infrastructure, including materials available on the RDS, SPO and Office of Research websites. In addition, the Peer Reviewers were able to review the report of the NCURA Peer Review evaluation since that peer review had preceded the NORDP site visit. NORDP peer reviewers were also given biographical information on all key stakeholders scheduled to meet with them during the site visit.

Discussion
The preparation of background materials for reviewers was more challenging than initially anticipated. The process was time consuming and required coordination with campus office staff members who did not always understand how the work of their units fit into the research enterprise. Indeed, in some instances key stakeholders did not really understand the role of infrastructure support within a research institution. Thus, it was occasionally challenging to obtain the necessary documents from these units given that they did not understand why it was necessary or even important for them to participate in the review. Additionally, there was discussion around whether or not to provide certain information that could potentially reflect poorly on a specific department. Although the review teams were very explicit about not creating procedures that did not exist before the review, there were administrators and staff within the institution that were not comfortable disclosing that certain policies or procedures did not exist. All materials were eventually provided and all stakeholders understood that without full disclosure the University would not benefit completely from the reviews. The preparation of the briefing binder brought about a broader understanding of the role of all campus offices in the research infrastructure. This was an unanticipated positive side effect.
It became very evident that clear communication was extremely important in getting cooperation. The Directors of SPO and RDS and others involved in the review spent considerable amounts of time explaining to stakeholders how what they did fit in to the overall research structure. It also was very time consuming to discuss the benefit of full disclosure in gaining the full benefit of the reviews.

Preparing our Community for the Peer Review Site Visits

After Peer Review teams from NCURA and NORDP were identified for each unit review, the staff of each unit began preparation for the site visits. As noted above, there was a tremendous amount of preparation necessary in order to assure that the peer review teams had access to the information needed to understand the historical context of development of the research enterprise at UC Merced and to conduct appropriate interviews of key stakeholders. In addition, stakeholders needed to be informed of the site visits and the charge given to the peer review teams so that they would understand the importance of their availability and be prepared and willing to give candid and open feedback during the key stakeholder interviews. In some instances where participation was deemed particularly critical, the Vice Chancellor for Research also contacted key stakeholders regarding the site visit.

In one instance, an invited staff member who had participated in the NCURA review did not participate in the NORDP review because he was instructed at the last minute not to attend by his supervisor, apparently because the supervisor felt that the staff member was not senior enough to provide pertinent information. This instance illustrated the importance of fully preparing all potential members of the University community regarding the peer review; the supervisor may not have understood the nature of the review or possibly was motivated by inter-departmental political conflicts. This situation did present a ‘lesson learned’ for other institutions undergoing an external peer review. Education as to the importance to the institution of the assessment is an important initial step in overcoming initial resistance during the peer review process.

The Review Team Site Visits

NCURA Review

After receipt of the Briefing Book and supplemental documentation, the NCURA reviewers scheduled a conference call with the Directors of SPO & CGA, the Vice Chancellor of Research, and the Vice Chancellor of Administration to discuss the charge for the site visit. This call briefly reviewed items received and confirmed areas the University wished the peer review team to focus on, as well as gave an indication of other areas that the reviewers would be reviewing based on potential areas for improvement identified in the documents already provided.

The Director of the Sponsored Projects Office coordinated the site visit and served as the single point of contact. The reviewers identified various stakeholders for interviews. The SPO Director worked with the Vice Chancellor of Research to coordinate various schedules and ensure the largest possible pool of participants. A single location on campus was identified as the NCURA Peer Review Team’s on-
campus meeting site. During the site visit the reviewers spoke with the SPO Director and her staff, the VCR, the VCA, the CGA Director and her staff, all Deans of the three Schools, the Directors of Operations within those Schools and Directors of Organized Research Units, Director of Research Compliance, Director of the Development Office, Director of Health and Environmental Safety, the Internal Auditor, General Counsel, Information Technology member, and members of the faculty.

The NCURA Peer Review Team spent two and one-half days on campus. The Director of SPO was the primary contact during this visit. The itinerary was altered to accommodate individuals that the Team wanted to “bring back” for additional discussion.

On the final day, the Review Team held an exit briefing for the Vice Chancellor for Research, Vice Chancellor for Administration, and for the Directors of SPO and CGA. In this briefing, the Review Team identified seven broad themes resulting from this visit, including:

1. Organizational Structure,
2. Roles and Responsibilities,
3. Education and Training Plan,
4. Communication Plan,
5. Electronic Research Administration,
6. Responsible Conduct of Research Training, and

The initial observations made during the exit briefing by the NCURA Review Team were not surprising; what was surprising is how obvious the weaknesses were to the Review Team. The draft report was sent to the campus for comments thirty days after the site visit. After the draft was received, the Directors of SPO and CGA disclosed the initial observations made by the NCURA Review Team at the monthly Research Administrators meeting in an attempt to communicate to this campus community that changes to the present organizational structure, at some point, would occur. The final report was sent by NCURA ten days following the campus comments. The VCR circulated the final report to the campus’ Cabinet members and the Director of SPO placed the final report on the SPO website.

**NORDP Review**

Prior to their site visit the Peer Reviewers from NORDP held an initial teleconference briefing with RDS staff and with the Vice Chancellor for Research to discuss the charge to the Peer Reviewers and to develop and confirm a final agenda for the site visit.

The NORDP Peer Review site visit was scheduled over two full days, with key stakeholder meetings interspersed with time for the peer review team to meet individually to review and compare notes. In addition, time was scheduled on the evening prior to the first day of interviews for a campus tour and for an introduc-
tory dinner with the RDS staff, Vice Chancellor of Research, and the Internal Assessment Coordinator. During the NORDP site visit, key stakeholder interviews were held with each of the Organized Research Unit (ORU) Directors, Deans of all three schools, the Vice Chancellor for Research, all RDS staff, Director and staff of the Sponsored Projects Office, the Director of Federal Relations, and the Vice Chancellor for Development and Alumni Relations. Finally, several sessions were held for faculty to give input on RDS services; one session was targeted to specific faculty who had been assisted on major proposals; two other sessions were open to any faculty members.

Although lack of participation because of scheduling was minimal and approximately 20 faculty members were able to participate, it still was a ‘lesson learned’ from the NORDP review that scheduling is a major consideration and that it probably would be wise to schedule peer review visits well in advance and during the academic year rather than in summer, particularly if maximizing faculty participation is a goal.

At the end of the site visit, the NORDP Review Team met with the Director of RDS and the Vice Chancellor for Research to discuss the themes from their visit and anticipated findings and recommendations in the final report. In general, the reviewers reported high levels of satisfaction with RDS services among stakeholders (particularly faculty members) who were familiar with the unit activities. However, the Team also reported that staffing levels in RDS were not adequate to meet current or anticipated need. In addition, the team identified several themes regarding needed changes to the research infrastructure more generally; these areas of concern closely mirrored those themes identified by the NCURA Review Team. The final NORDP report was issued in August 2012 and was circulated in the same fashion as the NCURA report, as described above.

**Figure 3940.1-3.**

After the Peer Reviews: The Final Reports

UC Merced received a number of recommendations from both NCURA and NORDP for changes to the systems of research development services, proposal development services, research administration functions, and contracts and grants accounting systems to better support the research enterprise as the campus grows and develops.
into a mature research university. In virtually every instance the reviews from the NCURA and NORDP Review Teams were complimentary, which greatly enhanced their persuasiveness in ‘jump starting’ potential institutional change. In addition, the campus administrative leadership is beginning to transition from a ‘start-up’ model to a more standard model of ongoing operations at a research institution. Part Two of this Case Study will discuss the process for assessing recommendations, both short-term and long-term, and how the University community was engaged in that process.
The change process at institutions often brings a level of organized chaos to the environment as priorities are identified, strategies defined, and new approaches or models implemented. One of the key steps in the change process is engaging stakeholders in the strategies and approaches that are being considered. Their understanding, at a minimum, helps to ease the often lengthy process of shifting models or modes of operation. And stakeholder buy-in, optimally, results in a strengthened culture of service.

The University of California, Merced provides us with a glimpse of the nuances involved with engaging the institution’s stakeholders in this change process. The care with which communications occurred and discussion of proposed models has resulted in a positive outcome, even if different than originally designed. Two particular aspects are worthy of note. First, the strengthened collaboration between Office of Research leadership (research development, pre-award and post-award areas) both strengthened the process and helped guide the positive outcome. That collaboration continues to bring synergy and excitement to the research infrastructure. Second, the process illustrates the importance of nimbleness in adapting a change model. The resultant model has been strengthened by full buy-in within the partnership while working within the culture and adapting to primary stakeholder concerns.

Case Study Part Two: Assessing External Review Recommendations
Susan Carter, Director, Research Development Services, University of California, Merced; Autumn Salazar, Director of Research Accounting Services, University of California, Merced; Thea Vicari, Director, Sponsored Projects Office, University of California, Merced

This is the second of a multi-part case study about the assessment and change process for the research administration infrastructure at the University of California, Merced (UC Merced). Part One, which was released in July 2013, focused on the decision to engage external assessments: how this decision was reached, who was involved, the timeliness of the review, and details of the preparation for the Peer Review Teams’ site visits.

This Part Two discusses the Peer Review recommendations and the process that was undertaken to assess those recommendations, including both short-term and long-term response strategies; community engagement and response to the review; and the strategic process to gain buy-in for development of an implementation plan. Later parts of this case study will discuss the ways in which the recommendations drove institutional change, including significant impacts on the budget process; the challenges faced during implementation; and the outcomes and on-going assessment.
Recommendations from the Peer Review Process

As discussed in detail in Part One of this Case Study, two independent peer reviews of the research administration and research development infrastructure at UC Merced were conducted by teams from the National Council of University Research Administrators (NCURA) and National Organization of Research Development Professionals (NORDP); final written reports from these two reviews were issued in June and August 2012, respectively. Both reports were circulated to the campus’ Cabinet members and placed on the Office of Research website where they are publicly available².

The NCURA Peer Review Report identified 87 recommendations as opportunities to strengthen research operations in two broad areas as described in the NCURA National Standards: Institutional Infrastructure and Core Operations. The subcategories within Institutional Infrastructure included Organizational Structure; Communication, Outreach, and Education; Compliance and Risk Assessment; and Electronic Research Administration. Core Operations consisted of Proposal Services; Award Acceptance and Initiation; Award Management; and Research Ethics.

The NORDP Report focused more specifically on operations within the Research

Development Services (RDS) Office. The report contained 30 recommendations within ten areas in which the University should strategically invest in order to grow and strengthen RDS. Investment in these areas was expected to strengthen the research enterprise in general and more specifically in such areas as: the research environment and strategic planning; proposal development and submission; funding opportunity dissemination; training and professional development; communication and outreach; proposal tracking and assessment; and funder/agency strategies.

In nearly every instance, the recommendations from the NCURA and NORDP reports were complimentary. Both reports identified clear institutional barriers to the effectiveness of the research development and administration enterprise, notably in the areas of staffing configurations and the lack of electronic research administration infrastructure. The overlap and synchronicity between the recommendations in the two reports has proven to be extremely beneficial in beginning and implementing institutional change.

**Process of Assessing the Peer Review Recommendations**

Immediately following the exit meeting by the NCURA Peer Reviewers, the Vice Chancellors for Administration (VCA) and for Research (VCR) and the Directors of the Sponsored Projects Office and the Contract and Grant Accounting Office, discussed anticipated findings. All individuals involved in those discussions were fairly certain that the findings would confirm existing campus observations of challenges in research administration. Receipt of the draft NCURA report confirmed this conjecture by including recommendations covering all of the expected areas. There was nothing in the report that came as a surprise to leadership in the Office of Research. The draft report was shared broadly with research development and research administration staff in both the Office of Research and in Contracts and Grants Accounting in order to obtain sufficient feedback on any inaccuracies within the report. Only minor modifications were made to the draft report, most of which related to clarification of processes or policies. There were no recommendations with which the campus took issue. A very similar process was followed for the NORDP draft report, and again, the recommendations contained in the report were not surprising or unexpected.

After receipt of the draft reports, those involved in the review began to discuss how this information would be disseminated to the campus. There were discussions surrounding how broadly the information should be disseminated and what the impact of that dissemination would be. Ultimately it was decided, given the importance of the recommendations and of maintaining transparency in the response, to make both reports widely available on the Office of Research website.

Upon receipt of the final reports, the UC Merced VCR met individually and jointly with the Directors of the Sponsored Projects Office (SPO) and Research Development Services (RDS), as well as with campus top leadership and representatives of the Academic Senate, to discuss campus assessment of the recommendations. Because Contract and Grant Accounting reported to the Controller’s office at the time the report was issued, there was some coordination with the VCA. The
VCA was kept updated by the VCR as he updated all senior leadership. As an initial step, the recommendations in the reports were ‘triaged’ into two categories.

1. The first category consisted of those recommendations that had no significant budget or ‘political’ implications and thus could be implemented quickly based on internal discussions within the Office of Research and without engaging key stakeholders. Many of these recommendations were adopted almost immediately as long as the VCR and unit directors deemed them to be necessary. For example, pursuant to a recommendation in the NORDP report and with the concurrence of SPO, the responsibility for managing the campus process for sponsors that limit the number of proposals received from UC Merced was transferred from SPO to RDS. Similarly, the Directors of the Sponsored Projects Office and the Contract and Grant Accounting Office immediately adopted an NCURA recommendation to co-chair monthly meetings for the research administration staff in the Schools and Organized Research Units (centers and institutes) in an effort to address how the business activities in these units support the research enterprise.

2. The second category consisted of the recommendations that required either significant resource expenditure and/or institutional restructuring of unit roles and responsibilities to fully implement. The VCR recognized that campus administrative leadership, including units external to the Office of Research, would need to be engaged to participate in the response to these recommendations. An example of this type of recommendation would be the recommendation that the campus implement an electronic research administration system. This not only meant a significant cost to the campus but also the start of conversations around the appropriate structure of research administration to support the campus in the future.

As an initial step in this engagement process, the VCR asked the Director of SPO and the Director of RDS, along with the Director of Contracts and Grants Accounting, to form an assessment and implementation team to respond to the recommendations made by the NCURA and NORDP Peer Reviews. Specifically, the Directors were asked to develop a ‘White Paper’ whose purpose was to take into consideration the recommendations made by the two Review Teams and to propose new research administration models which would create efficient, scalable processes for the entire grant life cycle. The White Paper was also to include a strategic plan to support these services through 2020; the year the campus is expected to reach a size necessary for financial self-sufficiency and world-class research university recognition. While the White Paper did not address all of the recommendations of the NCURA and NORDP assessment reports, the proposed models assumed that some of the basic elements of a research development and administration system, notably the implementation of a fully functioning electronic research administration system, would be in place as the model was rolled out to the Schools and Organized Research Units (ORUs). Both reports recognized and stressed the importance of implementation of electronic research administration as part of their core recommendations.

The following timeline illustrates the overall steps that will be explained in the subsequent sections.
Figure 3940.2-2.

Developing the White Paper

The Directors met weekly between July and September 2012 to work on the draft White Paper. The initial strategy was to focus on those changes that could be accomplished without significant budget implications given that the call for a new University budget request would not be made for several months. In addition, the Directors felt that this approach would have greater appeal to the University leadership. While the White Paper was primarily focused on the short-term benefits of adopting recommended changes, a significant portion was devoted to cost effective solutions to transitioning to a long-term research administration model.

Given this collaborative approach used by the three Directors as well as ‘buy in’ from the Vice Chancellor for Research and the complimentary focus of the recommendations in both the NCURA and the NORDP reports, the Directors were reasonably confident that their proposed model would be sanctioned to move forward toward implementation subject only to budgetary constraints. Indeed, as the White Paper was being written, drafts were shared periodically with both the Vice Chancellor for Research and the Controller for feedback. The Directors wanted to be sure that nothing was included that would be impossible to implement or that would violate institutional policy. This continued dialogue also ensured that the Directors were continually aware of, and could incorporate, higher-level decisions that would impact the models being proposed.

An unexpected, but incredibly beneficial, side effect of the work on this White Paper was the working relationship that was developed between the three Directors. Prior to this process, the Directors of RDS and CGA had never met one another. Working so closely together allowed each Director to gain extremely valuable insight into how their unit impacted the other, as well as to develop models for future communication between the units.

The initial draft White Paper was finished at the end of September 2012. It was significantly longer than initially expected and had morphed into more of a proposal than a White Paper. The model proposed was a traditional one. Under this model, RDS would maintain a central office but also place RDS coordinators in the schools and Organized Research Units. The staff would continue to act as a liaison
with the funding agencies, manage the limited submission process, provide faculty training on grantsmanship, and assist faculty with finding funding opportunities and development of strategies to expand their research funding portfolios. The SPO would return to a more traditional model where the research administrators would no longer provide pre-award or proposal preparation services and instead only review proposals prior to submission and negotiate and accept awards. CGA would continue to function as the central post-award office handling fund setup, invoicing, cash collection, and reporting. The day to day management of the awards would be moved out of SPO and would be performed by department level administrators who, in addition to managing the award, would also assist the faculty with traditional pre-award proposal development, including preparation of non-technical forms, budgets, and budget justifications.

The implementation of this model would have had no impact in the budget year in which it was initially proposed. It required only a shifting of responsibilities in the short term. There would have been a need to request new staff in the following year. It was projected that there would need to be an additional person in both SPO and CGA; there would need to be four additional staff hired in RDS in order to have one per school and organized research units; and the departmental research administrators would need to be increased by 1.5. Based on this model, the total FTE being added for that next budget year would have been 8.5.

Sharing the White Paper with Stakeholders

Once completed, the draft White Paper was shared with leadership via a presentation by the Chancellor’s Cabinet as well as with the Academic Senate. The VCR reported that initial responses from individuals in these meetings were very positive.

From September through November 2012, the Directors waited for comments and reactions to the final draft White Paper from University Leadership. When it did come, it was not what the Directors expected – at all. Most Cabinet members were supportive but had little comment. However, one of the School Deans was adamant that a single research administrator in the School could not perform both pre- and post-award functions. Specifically, this Dean felt that all pre-award services should be centralized and asked that RDS fulfill this role in addition to the roles outlined in the White Paper. This Dean acquired buy-in from the other two School Deans and subsequently became a spokesperson for this group.

Given previous discussions between the VCR and campus leadership in review of White Paper drafts, the Directors were greatly surprised by this response. The Directors had several meetings to attempt to identify the reason for the opposition to the proposed model. Some of the issues discussed were:

- the extent to which the Dean’s alternative model was based on that other institutions (notably the Dean’s last institution),
- whether the Dean was proposing a model that avoided possible staffing and personnel concerns within his School, and
- what evidence existed that supported his division of pre and post award duties.
as a more effective model.

Subsequently, a meeting between the Vice Chancellor for Research, the Dean, and the Directors was held. In this lengthy meeting, a frank discussion ensued where the Directors were able to ask the Dean for his rationale and motivation for proposing his model. It was obvious in this meeting that the Dean was not going to be persuaded to change his mind. The Directors agreed to a compromise where Research Development Services would assist all faculty with pre-award proposal preparation should their services be requested. In addition, the Director of Contract and Grant Accounting agreed to serve as a dotted-line supervisor for those individuals in the Schools and the Organized Research Units who performed post-award monitoring of grants and contracts. The Sponsored Projects Office would return to a traditional role of reviewing and authorizing proposals and reviewing, negotiating, and accepting awards on behalf of The Regents of the University of California.

Lessons Learned

One of the lessons learned from the entire process of vetting the White Paper was that it is probably wise to seek input on the specifics of such reorganization proposals, as early in the process as possible. Leadership, including the Deans, had been kept apprised of developments at the ‘thirty thousand foot’ level, but it would have been wise to be sure they were fully aware of some of the details. This is a particularly important lesson when working with faculty leadership, since as scientists and engineers they are often concerned with micro-level details in their daily research and teaching activities.

Another major lesson was the importance of communication in change management: it was difficult to communicate to office staff changes that happened quickly and sometimes unexpectedly, but the end result of not communicating the uncertainty and discussions around the White Paper was that staff were anxious about the impact on their job responsibilities for a longer than expected implementation phase.

Community Engagement in the Response to the Proposed Model

As a result of the discussions of the White paper, the resulting proposed model was ready to be shared with the broader community. It was important that those employees who had research administration responsibilities in the central offices and in the Schools buy into this new proposed approach, since it involved considerable realignment of job duties and lines of supervisiorial reporting. The Directors of RDS, SPO, and CGA communicated this new proposed model to their direct reports. These direct reports had participated in the Peer Reviews and were versed in the recommendations made by the Peer Review Teams. Nonetheless, the initial response to the proposed restructuring based on the peer review recommendations and subsequent discussion with leadership varied: the proposed changes were threatening for some and confusing for others. This chain reaction of emotions made it difficult for the staff in these three offices to focus on work since they were no longer certain what their job responsibilities entailed or would entail in the future. To complicate the issue, there was no definitive timeline as to when the proposed restructuring
changes would take place or could take place given that the current University’s budget cycle was in mid-fiscal year. Through this period of upheaval, the Directors remained committed to working toward a single model of research administration for the campus and transparency to the affected staff.

A breakthrough occurred when the VCR requested and received mid-year funding for two new positions in RDS and in SPO. In addition, the VCR was able to redirect funds in order to purchase software to accommodate the submittal of system-to-system proposals to some federal agencies, as a first step in the development of a complete electronic research administration system. These advances demonstrated to the research administration community that change was imminent and that the campus would implement the recommendations made by the Peer Review Teams in an incremental and ordered manner.

Once support for the revamped proposed model was gained from the Deans, much of the process of gaining support from other leadership was relatively easy. Faculty were very supportive of the plans because it was seen as a promise of expanded service levels. Additionally, it was clearly communicated to faculty that any changes would be made from a customer service focus (with the faculty as the customer). Indeed, the faculty were some of the strongest supporters of implementing the recommendations, precisely because of the proposed increased administrative support. In that regard, the fact that the University of California operates under a shared governance system was a benefit in implementation; it is conceivable that the entire process might have proceeded differently at an institution without shared governance.

The only real barrier encountered in later stages of implementation was from the campus IT Department, which historically had not provided much support for research and research endeavors on campus. The IT Department was not fully versed in the importance of research administration (and had declined to participate in at least part of the peer review process, as discussed in part one of the case study); most importantly, the IT Department lacked the resources that would be necessary for implementation of a full-scale ‘in house’ electronic research administration system. Ultimately, these concerns were addressed by a decision to move to purchase an external software as part of a cloud based system and that bypassed the need for large amounts of in house technical support.

**Part Three of the Case Study**

Part Three of this case study will discuss the process of obtaining funding support in the University budget process for the expanded research development and administration services once the leadership in the Cabinet and in the Academic Senate accepted the basic concepts and proposals contained in the revised White Paper. Subsequent parts to this case study will also discuss the design of the system as implemented, challenges during implementation, and on-going assessment.
Peer Reviews at the University of California, Merced: Part Three
Peggy S. Lowry, Director, NCURA Peer Programs

This third part of a case study continues to examine the research administration change process at the University of California, Merced. Described in this third section are some of the challenges that occur with organizational change and the resulting difficulties when shifting positions and responsibilities. Visioning the change and implementing the change can bring to the forefront the need for in-depth communications between offices as well as significant attention to individuals who are impacted by the change.

Three particular aspects are worthy of note in this portion of the case study.
1. First is the significant change that is occurring with transforming services. This transformation is focused on identifying and implementing the types of services that will benefit faculty, through services offered by both people and software. While it is apparent service has always been a priority at UC Merced, there is sustained and clear expectation to create an infrastructure that supports research growth, with faculty needs at the core.

2. Second is the continuing attention to communication between the offices that support the research enterprise. This communication strengthens the understanding of the broad continuum that is research administration and the important roles that each office, and person, play in those services.

3. Third, as the research administration profession has become established with career opportunities offered throughout the world, the often difficult aspects of successful recruitments and offering established career paths becomes a key focus for many institutions, as it was with UC Merced. Given additional challenges of location and pay scale, many institutions are faced with investments in conducting national recruitments that may ultimately result in training and developing local personnel.

This in-depth review of the evolving research administration infrastructure continues to offer a number of valuable lessons learned in the process of implementing change.

Case Study Part Three: Navigating the Budget Process and Beyond
Susan Carter, Director, Research Development Services, UC Merced
Autumn Salazar, Director, Research Accounting Services, UC Merced
Thea Vicari, Director, Sponsored Projects Office, UC Merced

This is the third part of a case study about the assessment and change process for the research administration infrastructure at the University of California, Merced (UC Merced). Part One focused on the decision to engage external assessments: how this decision was reached, who was involved, the timeliness of the review, and details of the preparation for the Peer Review Teams’ site visits. Part Two, which was published in January 2014, discussed the Peer Review recommendations and
the process that was undertaken to assess those recommendations, including both short-term and long-term response strategies; community engagement and response to the review; and the strategic process to gain buy-in for development of an implementation plan.

Part Three discusses the process of obtaining funding support in the University budget process for the expanded research development and administration services. Also discussed are the challenges faced in recruiting for the new positions, issues with existing personnel, the importance of communication, the need for data, implementation of an electronic research administration system, workload determination of the “new” model, and lessons learned. Part Three will cover the period April 2013 through October 2014.

The Budget Process at UC Merced

Prior to the formal budget decision process in July, and as mentioned in Part Two of this case study, a breakthrough in implementation of a new research administration infrastructure at UC Merced occurred in April 2013 when the Vice Chancellor for Research (VCR) requested and received mid-year funding for two new professional positions in Research Development Services (RDS) and the Sponsored Projects Office (SPO). An additional professional RDS position was created when the Dean of one of the Schools offered to transfer an FTE from the School to RDS in order for that FTE to work in proposal development. Additionally, the VCR was able to re-direct funds to purchase software to accommodate the submittal of system-to-system proposals to some federal agencies, as a first step in the development of a complete electronic research administration system. These advances demonstrated to the research administration community on campus that change was imminent and that the University would implement the recommendations made by the Peer Review Teams in an incremental and ordered manner.

The University call for the July 1, 2013 through June 30, 2014 academic year operating budget was issued in January 2013. Each area of the institution submitted funding requests before the end of March 2013 for their unit’s highest priorities that were in line with one or more of UC Merced’s 2013-14 budget priorities, listed as follows:

1. Strengthen the research infrastructure
2. Build capacity and excellence in graduate programs
3. Respond to critical undergraduate enrollment demands
4. Improve the student experience, academic success and retention
5. Address faculty or staff retention challenges
6. Promote operational efficiency or effectiveness
7. Ensure campus safety and regulatory compliance

Budget narratives were reviewed by the Budget Review Committee, which makes recommendations to the Provost and Chancellor regarding the highest priorities for support. In the spirit of transparency, all budget narratives were posted on a...
password protected website. The Chancellor, with the assistance of the Budget Office, posted her funding request decisions online and discussed these decisions with faculty and staff in an open forum.

Research administration infrastructure competed with all areas of the University for funding. The VCR presented a budget request that focused on the need to address the recommendations of the peer review process through adaptation of a ‘research ecosystem’ that included elements of the peer review recommendations. This request also focused on providing ‘cloud based’ support for the research administration ‘ecosystem’ through the purchase of an entirely web-based electronic research proposal and award administration system. The VCR pointed out in his budget request that this electronic system aligned with almost all of the budget priorities listed above, particularly items 1, 2, 6 and 7. The requested additional budget items were given high priority and at the conclusion of the budget process, in addition to the mid-year positions discussed previously, the Office of Research was given an FTE in Research Accounting Services (RAS) and a third professional position in RDS in support of the new structure. The School of Engineering and the School of Natural Sciences each were allocated one new FTE to complement the VCR’s budget request.

**Challenges in Recruitment**

*General Recruitment Challenges*

Given the geographical location of the University, recruiting new staff to support research poses unique challenges in two areas.

1. For many higher level positions there is a limited local talent pool from which to pull. The closest research universities are either in the Sacramento or San Francisco Bay areas, both of which are approximately two to three hours’ drive from Merced. While the cost of living is lower in the Merced area, recruits are asked to give up the conveniences of living in the city for a more rural lifestyle. This reduces the number of candidates who are interested in pursuing positions at UC Merced, regardless of skill level. In addition, the pay scale is lower at UC Merced compared to other University of California campuses, although cost of living is also lower, particularly for housing. This makes the campus potentially less attractive to those employees who want to relocate but still remain within the UC system.

2. Recruiting from existing employees is also difficult. The University is growing rapidly but there has been little focus on training employees on research administration. There is training available to those who are currently in research administration at UC Merced but these trainings are rarely offered to those outside of the research administration classification. When the trainings have been offered campus-wide, there has been little interest in attending. There has long been a perception that the work is difficult. This unique environment can make it difficult to recruit from within for higher level positions like those that were a part of the proposed research administration restructure.

In addition to the challenges posed by geographical location, we faced the chal-
lenge of recruiting for positions that were not well defined. Given the major restructure that had taken place, it was difficult to say exactly what the job duties would be going forward. Because of the compartmentalization of the duties in research administration, positions were posted specific to RDS with the additional work of proposal pre-award assistance; the SPO positions lost any proposal development aspect; and the departmental research administrators became strictly post award. This was unique enough that we faced questions from candidates regarding exact job descriptions, which we did not have, and found ourselves with unusual candidate pools.

RDS Recruitment Challenges
Recruitment started for the three new RDS positions following the budget approval in April to August 2013; the recruitment was completed in September 2013. The formal classification for these positions was that of a Research Administrator 3; the working title was “Research Development Officer” (RDO); these positions were advertised as ‘front line’ positions that would work with faculty both individually and in groups, to provide support for proposal development as well as for facilitating research collaborations and helping faculty plan strategically to obtain funding for extramural research.

For one of the three positions, RDS was able to promote an existing RDS staff member from an administrative/analytical position to a professional RDO position after determining that a majority of that staff member’s actual duties had been at a higher level than her classification. A national search was conducted for the other two new positions.

RDS encountered a number of challenges in this recruitment process. The pool of applicants was small, despite an aggressive recruitment process. In addition, several top candidates withdrew from consideration based on what they viewed as limitations of relocating to the Merced area (these concerns focused mostly on personal issues related to services and schools in the Merced area). Lower salaries than offered by other institutions were also a barrier to external recruitment. In the end both candidates that were hired based on the external search had prior work history at other UC campuses or affiliates. Once the RDS unit was fully staffed the RDOs were matched to specific duties and faculty based on RDO experience and interests, and to assure continuity.

Departmental Post-Award Recruitment Challenges
In addition to the RDS positions, there were three departmental post award positions which opened up as a result of the reorganization. There were two positions in the School of Natural Sciences and one in the School of Engineering. In preparing to hire these positions, it was decided that the Schools and the Director of Research Accounting Services would come together and standardize the job description for these positions. Because of the standardization, the jobs were posted together and interviewed by the same committee. The idea behind this was to be able to pull candidates across position pools if there was one School who received more qualified candidates than the other.
For one of the two positions in the School of Natural Sciences, an existing employee in that School, who had been working in grant administration as a contractor, was hired into the permanent position. The second position was much more difficult to fill. Similar to the RDS search, several of the top candidates withdrew based on issues with relocation to the Merced area. The second post-award position in the School of Natural Sciences remained unfilled until December 2014, taking over a year to fill.

The position allocated to the School of Engineering had a pool which yielded no qualified candidates. Complicating this was an administrative restructure in that School. The decision was made to put the position on hold and attempt to recruit for it again after the administrative restructure. That position is currently unfilled and was reposted in October 2014.

In the end, there were few qualified candidates who applied for the open post-award positions even though, as with the other research administration positions, there had been aggressive recruitment.

Challenges with Existing Personnel
The confusion regarding the exact responsibilities for the new positions was not felt by the job candidates alone. The existing staff, particularly in SPO and Research Accounting Services (RAS), which had larger, more established staffs than did RDS, also struggled to understand the new structure. The staff became confused about how they fit into the bigger picture; what their own career prospects were; and what benefit they ultimately provided to the University. Although there had been very high-level definition of the new responsibilities of the offices (see below), this was not translating well to existing staff.

High level responsibilities:
◆ Research Development Services (RDS) – Assist faculty with identifying funding opportunities and assistance with proposal preparation.
◆ Sponsored Projects Office (SPO) – Proposal review and submission. Award negotiation and acceptance.
◆ Research Accounting Services (RAS) – Central office financial management of extramural awards.
◆ Departmental Staff – Post award extramural funds management.

Impact on Existing SPO Staff
The reorganization impacted several employees in the Sponsored Projects Office who were not happy about losing the proposal preparation portion of their job. As a result, one individual in the office actively sought a similar position at another institution and eventually left when the University could not counter the offer. That departure left some remaining staff stressed and concerned about how they would keep up with the volume of work under a new structure. Recruitment for the vacant position in SPO began immediately but the candidate pool did not contain seasoned candidates, for many of the reasons discussed earlier. Instead, the outcome of
this search resulted in selecting an incumbent who would need to be trained due to lack of direct experience.

Impact on Departmental Research Administrators

The departmental post-award research administrators were also upset about the restructure, specifically the changes made to their job descriptions which omitted any pre-award work. They struggled to understand how one could decouple pre- and post-award and still be efficient. They were concerned about identifying hand off points for the budget information that goes in to the proposal and how this reduction in scope would ultimately impact their own career. This was further complicated by the fact that initially the RDS staff did not have the financial access necessary for budgeting which required the department RA’s to provide this information. This confirmed their opinion that the new structure was inefficient.

The loss of all pre-award work performed by Departmental RA’s adversely impacted their relationship with the faculty as they now only interacted with the faculty member when discussing administrative transactions on existing grants. While assisting with pre-award the departmental RA’s gained an understanding of the scope of work tied to the funding and could better assist faculty with navigating policy. That understanding of scope was reduced significantly once they were no longer involved in the preparation of the proposals. The end effect was that they no longer felt as though they were partners in the research process and struggled to see the value they added to the research enterprise or the University as a whole.

Additionally, when the departmental research administrators were involved in the pre-award process, they had found it easier to manage their workload because they had an idea of the number of and restrictions on potential future awards. This insight into future awards was eliminated with the restructure and would not be reintroduced until the electronic research administration system was implemented.

Impact on RDS Staff

The integration of some of the proposal development and pre-award services with the strategic work that the RDS staff performed to help faculty identify and pursue funding opportunities did lead to new, strong relationships between faculty and these newly hired staff, who were assigned to work with the same faculty members over time. While outcomes have not been fully measured, preliminary indications are that in fact the RDS staff were successful in significantly increasing research funding during this period.

Determining Appropriate Workload and Business Processes

After the implementation of the new research administration structure and prior to embarking on the implementation of a new electronic system, it became clear that there was a need to map current business processes as well as ideal business processes. To this end, SPO, RAS, RDS and the departmental research administrators met with a facilitator for several days in July 2013 to begin this process. The resulting business process maps formed the basis for identifying areas for improvement,
areas where automation was possible/encouraged, and served as a roadmap for where we currently saw ourselves at the conclusion of the implementation of electronic research administration system.

The July sessions also began conversations around how the units within the Office of Research interact with each other and with their stakeholders. It was enlightening to have all parties in the room discussing how they assumed they were supposed to operate. The varied units began to really understand their dependence on one another and gain an understanding for why things were being done a certain way. This understanding led to less frustration and to more introspection.

**Development of the New Electronic Research Administration System**

In winter 2014, the VCR convened a functional team, the ERA team, to help bring about full implementation of the new ERA system. This group included:

◆ the Directors of RDS, SPO, and RAS,
◆ a representative from campus IT assigned to work with the Office of Research,
◆ the Assistant Director of SPO,
◆ one of the new RDS staff, and
◆ the VCR.

Subsequently, a project manager was hired for the implementation of the new ERA system and to oversee the work of the ERA team. The team met every other week beginning in October 2013. Utilization of the ERA system for proposal submission and for collection of proposal data began in July 2014. While full implementation of the system will be discussed in Part Four of this case study, it is important to note that system implementation created additional pressure on staff in all three central units as they began to learn a new electronic system at the same time that basic job duties were being altered.

One interesting outcome of the establishment of the ERA team is that, while it originally focused on giving input into the development of the new electronic system, it became a forum for communication and development of the research administration ‘ecosystem’ overall. A number of the team discussions focused around such areas as workflow and roles and responsibilities.

**Interaction among Research Development Services, Sponsored Projects Office, Research Accounting Services**

As mentioned earlier, one positive outcome of development of the new system was the implementation of a variety of mechanisms to increase communication and improve workflow between the RDS, SPO and RAS units. RDS and SPO staffs implemented weekly team meetings. These meetings are held on Monday mornings to provide a platform to discuss any unusual workflow issues anticipated during the week. Meetings are typically brief (a half hour or less) unless unusual issues arise, and meetings are held via videoconference due to the various campus and off-campus locations of the units. Additionally, the SPO and RAS Directors convened standing meetings to discuss implementation of the new Office of Management and
Budget Uniform Guidance which could alter business processes for their immediate staff and for departmental research administrator staff.

**Lessons Learned**

The development of the research administration ecosystem and the implementation of the new systems at UC Merced resulted in a number of ‘lessons learned’ that could be very important to consider at other institutions facing the challenges of major institutional change.

One lesson is to be very cognizant of the importance of change management in helping to address staff concerns about changing roles. As the process was rolled out, it became obvious that it was very important to clearly determine and document the roles and responsibilities of staff in those related roles. In that regard, it soon became clear in the context of rolling out the electronic research administration system that better definition was important even after the changes in staffing were well underway.

The staff of the RDS and SPO departments held a retreat in summer 2014 to discuss the changes that had occurred and to outline expectations about roles and responsibilities. One outcome is that both units are developing and revising desk manuals to contain this information. As part of the work of both the ERA Team and the RDS/SPO teams, the groups have begun to define and document workflows between the departments including expectations regarding response times, turn around times on interdepartmental requests, and various other interaction points. A follow-up retreat is scheduled for October 2014.

Additionally, the groups worked to define reasonable expectations about response times to faculty requests, particularly those sent from faculty at the last minute. These discussions led to set timeframes and submission deadlines that will be communicated to faculty from the VCR. An important ‘lesson learned’ is that communication on issues of timelines and submission deadlines should be made by the administrative leadership in as clear a fashion as possible.

The need for clear communication and the importance of the dissemination of information was a lesson learned from the ERA team meetings. The discussions at the team level did not necessarily always get fully communicated to all staff who did not participate in the team meetings. In that regard, it is an important lesson learned that even if there are structures in place for units to work together on a project, full communication to all involved staff and faculty is critically important.

One very interesting development happened during the hiring of the two departmental post award positions. There was a marked difference between the School of Natural Sciences and the School of Engineering candidate pools. A slightly different title had been given to the Engineering position, Post Award Analyst in Engineering versus Research Administrator – Post Award in Natural Sciences, with identical job descriptions. The Natural Sciences candidate pool drew much more qualified candidates than did the Engineering pool. It was a lesson in the importance of marketing the position correctly.

Part Four of the Case Study will cover the period November 2014 through April
2015 and will discuss the plan to assess the implementation of recommendations made by the Peer Review Teams - evaluate outcomes and ultimately determine if there is an improvement in services to the faculty.
Knowledge Check

The Q&As at ¶3990.1 are intended to be used in the training of new staff and others who may be less familiar with sponsored research administration. They are designed to measure how accurately the material contained in Chapter 3900 has been understood. Note: For the answer key for ¶3990.1, see ¶3990.3, which appears on a separate page (page 3990:5) for testing purposes.

Discussion topics at ¶3990.2 are designed to engender dialogue among staff on general issues of importance in the field.

¶3990.1 Q&As

1. Possible “risks” involved in conducting an assessment could include
   (a) A risk that a process or policy that is found to be noncompliant could carry associated costs to correct it
   (b) A risk that staff morale or the office’s credibility could suffer in the event of negative findings
   (c) Both (a) and (b)
   (d) Neither (a) nor (b)

2. In its basic sense, what is assessment?
   (a) A process to answer critical questions about staffing
   (b) A process to identify and categorize key information about the award
   (c) A process to look at what one does and how well one is doing it
   (d) A process to sensitize staff about the concerns and fears of stakeholders

3. Typically a site visit by a federal agency is
   (a) A means to gather data
   (b) Another word for an A-133 audit
   (c) A for-cause self-assessment
   (d) One approach to conduct a focus group

4. Another word for metric is
   (a) Measurement
   (b) Database
   (c) Integration
   (d) Optimization
5. The evaluator(s) should receive a written “charge” letter that
(a) Details the scope and purpose of the evaluation
(b) Concludes the evaluation assignment
(c) Provides follow up to the evaluation
(d) Includes payment for the engagement

6. As discussed in ¶3905, in using metrics for assessment, there are typically three general categories of attributes that can be measured and that will assist with assessment activities. Which of the following is NOT one of the categories?
(a) Individual performance metrics
(b) Operational metrics
(c) Primary consolidated metrics
(d) Customer service metrics

7. As discussed in ¶3905, benchmarks are standards used to
(a) Include all appropriate views from stakeholders
(b) Examine a particular aspect of the operation and how well it relates to that standard
(c) Recognize politics and “turf” issues
(d) Provide continual feedback

8. What is the so-called assessment-management cycle?
(a) Consideration of the types of information useful to and needed for the assessment
(b) An analysis of all models of assessment used by peer institutions to determine whether those models can be incorporated into the next assessment activity
(c) Another term for a successful cost feasibility study
(d) Good management practices routinely turn assessment results into management decision making and actions

9. Characteristics of a focus group as described in ¶3905 include all of the following EXCEPT:
(a) They are a relatively low-cost technique for gathering information on a particular topic or set of topics.
(b) A focus group typically consists of 8-10 individuals who participate in a “group interview” led by a facilitator.
(c) It is a relatively high-priced, expansive technique for gathering feedback.
(d) A focus group facilitator could be a consultant or someone from inside the university or the OSP.
13990.2 **Discussion Topics**

1. What types of assessments does your office regularly use for evaluating its operations and performance? Be sure to identify the purpose of each type now in use. Are existing assessments in your opinion adequate? Explain your answer.

2. Regular reviews of sponsored program offices also can be part of an institutional compliance and ethics program. How does this work at your institution?

3. It is valuable to seek a wide range of views and perspectives in planning for and during any assessment process. Discuss how this practice is implemented at your institution.

4. What is the relationship between training and assessment in your office?

5. In this period of limited resources, assessment might be relegated to the sidelines? Discuss some relatively and inexpensive activities you could undertake to determine the adequacy of your services?

6. Have you ever discontinued or dramatically modified a service you were offering (for example, a training session)? How did you learn/realize that the service was not meeting the needs of your constituents? How did you determine what modifications needed to be done, or how did you conclude that the services was best eliminated?

7. Think about the last time you hired a consultant. Describe the process used to select the consultant and the after-the-fact process to evaluate his or her effectiveness (including cost-effectiveness). Were the processes adequate? Is there anything you would change?

8. Do you regularly review existing assessment tools for continued effectiveness and breadth of coverage?
13990.3  **Answer Key**
Following are the correct answers to the questions included at ¶3990.1.
1. (c) Both (a) and (b)
2. (c) A process to look at what one does and how well one is doing it
3. (a) A means to gather data
4. (a) Measurement
5. (a) Details the scope and purpose of the evaluation
6. (c) Primary consolidated metrics
7. (b) Examine a particular aspect of the operation and how well it relates to that standard
8. (d) Good management practices routinely turn assessment results into management decision making and actions
9. (c) It is a relatively high-priced, expansive technique for gathering information.
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¶4120.44 Strengthening our Capacity to Build Long Lasting “Semi-Perfect” Relationships in our Multi-Generational Workplaces
Introduction

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Why leadership? Such a basic question has a profound impact on how we interact with others and focus on daily activities (both professionally and personally). Three fundamental points are to be considered when addressing this question:

1. **Leadership is a central aspect of the human condition.** Whether sitting through a staff meeting or in a sports arena cheering on our favorite team, leadership is seen as a pervasive aspect of our lives.

2. **The vitality of an organization succeeds or fails based on leadership.** We have all read about high performing organizations that have seen an increase in profit, productivity and job satisfaction due to effective leadership. Unfortunately, we are also aware of failures caused by ineffective leadership.

3. **Effective leaders are made not born.** In order to truly mature as leaders, we are continually learning and refining our abilities.

With these fundamental points in mind, the goal of this new chapter of the Guide is to provide informative articles and leadership tips that can serve as a resource as you navigate through life’s daily challenges. We will explore topics in developing human capital, mentoring, leadership skills and management with the goal of not only contributing to the development of an individual as a leader, but also as a well-rounded Research Administrator.

A question that is often asked, especially by research administrators, is “Why should I be concerned with leadership – particularly since I am not in a management position?” This was best answered in the March 2006 NCURA Newsletter “Leadership Tips” article written by Suzanne Rivera and Toni Shaklee:

Some readers may think, “I’m not a leader. What does this have to do with me?” But research administrators are leaders! Interpreting laws and regulations, creating forms and business processes, developing and delivering training programs, reviewing proposed budgets; providing appropriate protections to research subjects – each of these activities is a leadership function. Perform these functions well and with integrity and you teach others how to do research responsibly. Do them poorly and the quality of research at your institution will suffer.

Wikipedia describes leadership as “a process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task.” This viewpoint of leadership is focused solely on goal accomplishment. However, leadership can also be defined as the capacity to influence others by unleashing their power and potential to impact the greater good. Through this viewpoint, strong leaders initiate action, provide motivation and guidance, create confidence, build morale and support an efficient work environment. The focus of this chapter...
will be on understanding the role that human capital has in an organization’s success and recognizing and cultivating the potential of others.

In *The Essence of Human Capital in Research Administration*, Nancy Daneau and Michael Hadjiargyrou provide a framework for the effective development and management of human capital.

Two related articles, *You Mean it’s Not All About Me? Building Relationships using MBTI*, (Theresa C. Partell and Candyce C. Lindsay) and *Playing to Your Strengths: Bringing Out the Best in Both the Introverts and Extroverts*, (Erin Bailey, Julie Guggino and Samantha J. Westcott) discuss the benefits of utilizing the Myers-Briggs Type Indicator (MBTI) assessment tool in order to develop an awareness and appreciation of the ways in which different individuals process and act on information.

In *Mentoring*, Govind Narasimhan, Margarita Cardona, and Randi Wasik provide the perspective of a mentee, including tips on selecting a mentor and the importance of establishing a healthy mentee-mentor relationship.

A quote attributed to Jeffrey Pfeffer sums it up best: “Your most important task as a leader is to teach people how to think and ask the right questions so that the world doesn’t go to hell if you take a day off.”
§4101.1 Self-Assessment

While not a big fan of the classic western or war movie, when I do pause long enough during channel surfing I am often intrigued by the charismatic leader who is able to rally his troops and lead them into life-altering circumstances. In politics and business (and maybe within our own institutions) we often see leaders emerge who are truly inspirational. Research shows that transformational leaders – leaders who are positive, inspiring, and who empower and develop followers – are better leaders. They are more valued by followers and have higher performing teams.

A quick Google search will return various web sites touting the “10 characteristics of a Good Leader,” “23 Traits of Good Leaders,” and “Seven Qualities of a Good Leader.” Honesty, focus, passion, respect, confidence, clarity, motivation, spontaneity -- all very admirable traits and characteristics -- tend to be a recurring theme in many of these lists. The question is - how do we develop our leadership style and capabilities in order to become the leader we want to be? It has to start with the individual – with a focus on ‘the leader within.’ It is impossible to be a successful leader if you lack an understanding of your own motivations, limitations, values and personality traits.

In this update, the focus will be on the theme of self-assessment and the correlation this has to the development of our leadership skills.

In Wisdom in a Window: On Becoming a Leader, Gale S. Wood addresses the concept of self-assessment through the framework of the Johari Window, a conceptual model that has been used extensively for over 60 years as a tool for personal growth.

Winnie Ennenga, in the article Self-Leadership: The Life-Long Challenge, addresses the issue of self-regulation and provides guidance on leadership inventories that can assist in this on-going learning process.

In the article entitled The Incredibly Trustworthy Leader, Mary Louise Healy discusses the model of servant leadership and the importance of trust.

A Leader Listens, an article written by myself and Robert Holm deals with the importance of “active” listening – a skill all too often ignored.

Stephen Covey provides a great summation related to self-assessment:

“Personal leadership is not a singular experience. It is, rather, the ongoing process of keeping your vision and values before you and aligning your life to be congruent with those most important things.”
¶4101.2 The Art of Leadership

Full disclosure – I am not “creative” within the realm of visual arts. This would not come as a surprise to my 8th grade art teacher who (much to her credit) never gave up hope on me even after an inauspicious papier-mâché disaster (which I believe was meant to be a mask….). That said, the focus of this update will be on the art of leadership and management.

“Art” has been defined as “the expression or application of human creative skill and imagination, typically in a visual form such as painting or sculpture.” However, most people automatically equate art with the visual form(s) and overlook that the “application of human creative skill” lends itself to the principals of leadership. In a TED Talk given by John Maeda (President of the Rhode Island School of Design), he discusses the topic “How Art, Technology and Design Inform Creative Leaders.” Within the talk, Dr. Maeda discussed the intersection of art and leadership and (what I found most interesting) provided a comparison of the characteristics of traditional leadership versus creative leadership:

<table>
<thead>
<tr>
<th>Traditional Leadership</th>
<th>Creative Leadership</th>
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<tbody>
<tr>
<td>One-way</td>
<td>Interactive</td>
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<tr>
<td>Concerned with Being Right</td>
<td>Concerned with Being Real</td>
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<tr>
<td>Follows the Manual</td>
<td>Improvises when Appropriate</td>
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<tr>
<td>Loves to Avoid Mistakes</td>
<td>Loves to Learn from Mistakes</td>
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<tr>
<td>Reliability</td>
<td>Validity</td>
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<tr>
<td>Orchestra Model</td>
<td>Jazz Ensemble</td>
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<tr>
<td>Community in Harmony</td>
<td>Community in Conversation</td>
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<tr>
<td>Wants to be Right</td>
<td>Hopes to be Right</td>
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<td>Open to Limited Feedback</td>
<td>Open to Unlimited Critique</td>
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<tr>
<td>Sustaining Order</td>
<td>Taking Risks</td>
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<tr>
<td>Closed System</td>
<td>Open System</td>
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</tbody>
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While both styles of leadership “may” lead to expected outcomes, it is clear that creative leadership seeks to be a much more collaborative experience – one that benefits all parties, and increases the potential of all involved.

The following articles explore the intersection of art (creativity) and leadership in different ways.

In Leadership as Art, Beth Kroger discusses three essential themes which recur through the topic of “artful” leadership (integrity, building and nurturing relationships, and the crucial nature of community building).

Lealie M. Perry, in the article entitled The Evolution of Emotional Intelligence, discusses the concept of emotional intelligence. You may ask, “How does this relate to art?” This is addressed in two ways. First, when you review the components of emotional intelligence you notice that they have a striking similarity to the characteristics of creative leadership. The second way this is addressed is through Lealie’s use of the arts – literature in particular – to reflect how different levels of emotional intelligence and leadership abilities are exhibited (specifically in Shakespeare’s Taming of the Shrew).

Finally, Jeffrey Cufaude provides seven fundamental points for innovation in the article What is Required for a Facilitated Session to Produce Bold Thinking and Fresh
Ideas? The goal of this article is to help you to think more creatively in facilitating meetings – and for those of us for which meetings are a staple of our daily interactions, this is useful information!

“If your actions inspire others to dream more, learn more, do more and become more, you are a leader.” John Quincy Adams
¶4101.3 Leadership Tools

I am not particularly mechanically inclined. If it involves tools, construction and/or a motor, I am normally at a loss. I often share the story about coming home from church one Sunday and while pulling into the driveway noticing that my son’s window screen had fallen out of his window. Upon mentioning this to everyone in the car, my son exclaimed from the back seat that I should probably call my neighbor to help me put it back in. Clearly my reputation precedes me – even at home!

Having said that, tools are important in many ways -- from those which serve a purpose in accomplishing a task -- to the natural ability people have that can be utilized to further develop their capabilities. This update will provide you with some “tools” for your leadership toolbox.

In *The Tools of Extraordinary Leaders*, Kimberly Pace and David Furse provide some great recommendations that you can implement to further develop your leadership abilities.

Two articles in this update will address the importance of Emotional Intelligence (EI) as a “tool” for leaders. EI refers to the ability to perceive, control, and evaluate emotions. In a Harvard study, EI was found to be twice as predictive of excellent performance as expertise. It is also positively correlated with participative management, putting others at ease, relationship building, doing whatever it takes to win, and managing change effectively.

In the article *Exploring Emotional Intelligence (EI) for Better Leadership*, Michelle Vazin, Helena Moynahan and Robyn Remotigue provide an introduction of EI and its components. It also introduces the concept of “amygdala hijacking” (managing the trigger point for the fight, flight, or freeze response), which is further discussed in *Emotional Intelligence, Paper Tigers, and Pause Buttons*. In this article, Robyn Remotigue and Laura Letbetter more fully discuss how these concepts relate to research administrators.

Finally, the last tool for your toolbox is optimism. Ann Smith and Maria E. Valero-Martinez provide a great foundation for its benefits in the article *Is Your Glass Half-full or Half-empty? Creating a Framework of Optimism*.

“The expectations of life depend upon diligence; the mechanic that would perfect his work must first sharpen his tools.”

*Confucius*
Transformational Leadership and Team Performance

As the father of two boys who have both played sports (primarily baseball) since the age of five, I spend an inordinate amount of time on baseball fields. Over the years, I have enjoyed analyzing the interactions between various coaches and teams (whereas most people would just enjoy watching the games and their children…) and there are many cases where I noticed a direct correlation between the coaching style and the outcome of the game (although sometimes it just comes down to a great play!). How a coach “leads” his team has an impact on how the team performs.

Team interactions that, in some cases, seem to come naturally on the playing field do not often translate as well in the “real world.” However, the benefits of organizational teamwork are abundant and include (but are not limited to) the following: work efficiency (accomplishing tasks faster and more competently than tackling projects individually); improved employee relations (providing employees an opportunity to bond with one another); increased accountability (team members do not want to let each other down and do their best to contribute to the success of the team); and the establishment of learning opportunities (cooperating on a team enables newer employees to learn from more experienced staff).

The focus of this update will be on team performance, with an emphasis on the significance of transformational leadership to guide the process.

In Transformational Leadership’s Impact on Team Performance, Jo Ann Smith addresses the growth and significance of teams and how transformative leadership can positively impact the performance of teams in research administration.

Karen Woodward Massey provides tools and goals for developing and sustaining innovative and high-performing teams in the article entitled Creating and Maintaining Effective and Innovative Teams.

The Art of Facilitating, an article by Jeffrey Cufaude discusses the role of facilitation in an effort to build the capacity of teams, with tips that tie directly to the organizational benefits of teamwork.

As Research Administrators, teamwork and transformation are “buzzwords” that we often hear mentioned in meetings. The hope is that the information within these articles will provide you with the knowledge and tools needed to develop and maintain effective teams within your own institutions.

“The strength of the team is each individual member. The strength of each member is the team.”

— Phil Jackson
¶4101.5 Psychological Contracts

Psychological contracts are a contemporary concept which represents the mutual benefits, perceptions, and informal obligations between an employer and an employee. There are various models that illustrate this, but I find that the ‘iceberg’ model (found at http://www.businessballs.com/psychological-contracts-theory.htm) provides a useful tool for explaining and exploring the concept and its meaning for team-builders, trainers and leaders.

In most cases, only a small portion of the entire iceberg is visible above sea level. Now, picture the iceberg split down the middle as an employment relationship, reflecting the input (work) of an employee on one side and the reward (pay) of the employer on the other. While this “contractual” (employment) relationship is what is known (that which is seen), there are many factors just below the surface that can contribute to a stronger employment relationship (status and respect may lead to loyalty; responsibility can lead to innovation/performance). As these factors are initiated, more of the iceberg becomes visible, enhancing the relationship.

In most scenarios, discussions of psychological contracts focus on the employee’s position, however in Psychological Contracts and the Employment Relationship: What Managers Should Know, Bonnie O’Neill examines the dynamic between employees and employers in relation to psychological contracts with a focus on the manager’s perspective.

“People who never do any more than they get paid for, never get paid for any more than they do”

– Unknown
¶4101.6 **It Starts with You**

There are many quotes that refer to leadership as “a journey” attesting to the fact that it is not a stationary activity. However, do you ever stop to consider those who are on the journey with you? When I think about team building activities my memory automatically drifts back to college when I was a member of a service organization participating on the leadership team. At a retreat for the group, we participated in an activity in which all the team members held the end of a piece of rope in different locations throughout the room with the overarching goal of navigating to the person at the other end of your rope without becoming entangled with the other multiple rope trails that crisscrossed the room. If my memory serves me correctly, I do remember some cases of rope burn, but the activity required all the participants to work together and not individually in order to be successful.

In *It Starts with You: Five Ways to Build an Outstanding Team*, Donna Obeid provides her secrets to cultivating a great team with the hope of sharing information that will be both of value and of interest to those facing the challenges of team building.

*Individual commitment to a group effort - that is what makes a team work, a company work, a society work, a civilization work.*

– Vince Lombardi
¶4101.7  **Leadership in a “Smaller” Setting**

Is it possible to be a leader when you work in a setting with no (or limited) direct reports? Absolutely! Contrary to what is often expected, leadership is NOT management. Leadership is the capacity to translate vision into reality, and this is even more important at predominantly undergraduate institutions (PUIs) where one (or two) individuals tend to wear multiple hats: from pre- and post-award administrators to research compliance and technology transfer officers. Navigating a path from vision to reality is often very arduous when you have a team; imagine the issues that can arise in a smaller office!

In *Leadership of One: How to be a Leader at a Predominantly Undergraduate Institution*, Jeanne Viviani provides insights into the challenges and “opportunities” that are often encountered by individuals working in a smaller office setting.

*As a leader, the first person I need to lead is me. The first person that I should try to change is me.*

— John C. Maxwell
The Art of Juggling (better known as Work-Life Balance)

In twenty-three years of my professional career, I have had the opportunity to report (both directly and indirectly) to a number of managers with varied degrees of “balance” between their work and life. In one situation I worked directly for an individual whose work was her life. She had never married, had no children, was in the office before 7am every day and was often the last to leave. She had very high expectation for those who worked for her (thankfully, this was before the prevalence of smart phones and 24-hour availability)! Interestingly enough, while I reported to this individual, I was supporting a unit that was led by someone who was a leader on women’s issues for more than 20 years (at the time) and who had also wrote numerous articles and publications on work-life balance! Needless to say, it was an interesting three years.

While technology is wonderful, it can also contribute to an imbalance in our lives. Anyone else ever take a phone call from a panicked faculty member while on vacation? I had the pleasure of walking someone through the steps of submitting a report via the NIH eRA Commons system for thirty minutes while sitting in a pavilion in Italy (well, EPCOT Center, but it was still the Italy pavilion…).

Finding the right balance in our lives is important. Doing so as a leader is imperative.

In Leadership and Work-Life Balance, Laura Letbetter and Robyn Remotigue adeptly walk us through some of the research conducted in this area, providing tips for developing and maintaining balance, while also utilizing Kouzes and Posner’s five practices of exemplary leadership in bringing together leadership and work-life balance.

Imagine life as a game in which you are juggling some five balls in the air. You name them — work, family, health, friends and spirit and you’re keeping all of these in the air. You will soon understand that work is a rubber ball. If you drop it, it will bounce back. But the other four balls — family, health, friends and spirit are made of glass. If you drop one of these, they will be irrevocably scuffed, marked, nicked, damaged or even shattered. They will never be the same. You must understand that and strive for balance in your life.

— Brian Dyson, former vice chairman and COO of Coca-Cola
¶4101.9 The Building Blocks of Leadership

In order to be effective, leaders need to have a strong foundation. Ask anyone who lives in an area affected by severe weather conditions how important a home’s foundation is and you would most assuredly get the same answer – critical! Although I never was as enthralled with Legos® as some of my friends when I was younger (and, from what I’ve seen now, you need to have a Ph.D. in industrial design to build with them), I did grasp the concept of developing something of value from what would seem to be various inconsequential parts (or painful parts if you ever had the displeasure of stepping on them barefoot…).

In various articles, white papers and web postings, you can find many references to the “building blocks” of leadership. Depending on author, these range (in no order of importance) from “vision, interpersonal style, communication and decision making” to “passion, confidence, resilience and patience.” Is there a “right” set of building blocks? As is the mantra of research administrators everywhere, “it depends!”

In People First, Business Second – The Building Blocks Needed to Achieve Research Compliance, Roseann Luongo and Denise Moody describe five key competencies (building blocks) that a research administrator needs to establish to effectively balance customer service and compliance.

It is important to note that the building blocks of great leadership must be considered against the backdrop of performance objectives. Organizations need to identify their own appropriate building blocks, but the information provided within the attached article should give you guidance on your road to building that firm foundation.

“The basic building block of good communications is the feeling that every human being is unique and of value.”

— Unknown
¶4101.10  **It’s All About You**

At some point, we have all dealt with the “it’s all about me” mentality, especially those of us who have experienced parenthood, owned pets, or worked with a specific type of individual. However, in leadership (as in our daily lives), there are times where personal development and growth is necessary and warranted.

Within this update, we will be sharing five articles in which you will note a trend – it is all about you – and that’s ok!

In *Creating a Richer Life*, Christine Pacheco provides tips on managing yourself based on Stewart D. Friedman’s article *Managing Yourself – Be a Better Leader, Have a Richer Life*.

Riddick Smiley and Denise Moody discuss the concept of replenishment (and reflection) in their article *Replenishment Enhances Leadership Success*.

*Encouraging the Heart: Being a Positive Leader during Stressful Times*, an article written by Tammy J. Custer, offers tips on stress management for ourselves and those who work with us in order to set a strong leadership example.

Finally, two remaining articles *Using Nonviolent Communication in the Research Office* (by Cheryl Anderson, Carolyn Elliott-Farino and David Ngo) and *Difficult People: How to Know Them, How Not to be Them* (by Leerin Shields and Anita Mills) address the dark side of leadership – how to identify and deal with difficult people and situations.

“Knowing others is intelligence; knowing yourself is true wisdom. Mastering others is strength; mastering yourself is true power.”

— Lao Tzu
Effective Leadership for Research Administrators

What does it mean to be an “effective” leader? Meriam-Webster defines effective as “producing a decided, decisive, or desired effect.” Within the field of research administration, the word effective is used quite often – are our policies and procedures effective? Our training programs? Our support of faculty? Our compliance programs? In a recent NCURA Magazine (October/November 2014), the word “effective” was used 26 times! It is important that things be effective in our world.…

In the contingency theory of leadership, the success of the leader is a function of various contingencies in the form of subordinate, task, and/or group variables. The effectiveness of a given pattern of leader behavior is contingent upon the demands imposed by the situation.

As leaders, we need to be aware that effective leadership is not achieved solely through personal growth and reflection but through the ability to analyze and incorporate external variables into our decision-making.

In his article, Contingency Theory: An Alternative for Identifying Effective Leadership in a Constantly Changing Higher Education Landscape, Dr. Thomas Roberts integrates this theory into the ever evolving realm that research administrators live in order to better equip leaders with an understanding of the variables that impact leadership and the decisions that have to be made on a daily basis.

“Effective leadership is not about making speeches or being liked; leadership is defined by results not attributes.”

— Peter Drucker
||4101.12 **A Step-by-Step Guide to Discovering the Leader in You**

Tricia Callahan, Director of Proposal Development, Office for the Advancement of Research and Scholarship, Miami University

When assisting faculty new to electronic proposal submissions, I find it’s helpful to list the steps they need to take from start to finish:

- Step 1. Log into FastLane.
- Step 2. Select “Proposal Functions.”
- Step 3. Select “Proposal Preparation.”
  …and so on.

Providing a set of instructions assists faculty in navigating new systems and in learning new ways to do things. Listing the steps also ensures that nothing is missed along the way. Because I prefer a structured approach to most things — and I don’t want to miss anything along the way — I am always seeking guides to help me get from A to B.

Recently I began a leadership journey. I started out by attending NCURA’s workshop on *The Practical Side of Leadership*. From there I was fortunate enough to be selected to take part in NCURA’s Executive Leadership Program (ELP). I discovered, somewhat to my dismay, that there is no one step-by-step guide to leadership. That’s because leadership is a practical skill, and the art of leadership is often dependent upon the task or situation, the team being led, the organizational structure in which leadership occurs, and the experience and traits of the leader.

The good news is that while there may not be instructions for leadership per se, there are a number of leadership tools at our disposal that can help guide us on our leadership journey. The purpose of this chapter update is to showcase some of the steps, tools, and resources needed to begin and continue the leadership journey, beginning by discovering the YOU and ending by — well, it’s a journey, not a destination.

**Discovering the YOU**

One of the first steps on the leadership journey, as explored by Derick Jones in *Achieving Leadership by Moving “YOU” Out of the Way*, is to understand and own those experiences and personality traits that shape you as a person and as a potential leader. Once you understand, accept, and trust who you are, you can move from the “YOU” as a person to becoming an inspiring leader.

But how, exactly, do you come to understand yourself — including the abilities you possess and the traits you value in a leader? In her article *Tools for Assessing Your Leadership Skills*, Michelle Schoenecker compares two well-known, reliable inventories (the Leadership Practices Inventory® and the DiSC® Profile) that provide in-depth assessments into behavior styles, personality traits, and leadership qualities. These tools are explained in terms of indicators, use, and scoring. Schoenecker sums up each tool by sharing insights gleaned over the course of her NCURA ELP experience after using these assessments to better understand her YOU and her leadership journey.
Rounding out this update is a description of the Lead Me Program. Lead Me has launched over forty NCURA members on their personal leadership journeys. Here’s what participants in the program have to say about Lead Me - Discovering the Leader in YOU:

“The program challenged me to think outside my comfort zone. I still think to this day that they didn’t realize they awakened a roaring lion within.”

– Derick Jones

“The program acts as both a mirror and window.”

– Theresa Caban

“This program is a great stepping stone for those wanting to discover more about themselves…”

– Nelson, Moya, Pettis, and Purves

A quote by Vince Lombardi sums up this update best: “Leaders are made, they are not born.” I hope this update provides the tools you need to help guide your steps as you embark on your leadership journey.
¶4101.13 **Leadership and Staff Development**

“Staff development represents an intentional effort by supervisors and administrative leaders . . . to improve staff members’ effectiveness, leading to improved organizational effectiveness.”

— Winston & Creamer, 1997

Staff development, whether formal or informal, helps staff acquire and cultivate the skills and competencies necessary to advance the missions of their organizations. While promoting improvement in organizational effectiveness, staff development also promotes individual professional growth.

The most effective staff development practices are ones that are mutually beneficial to both the individual and the organization, and ones that tap into the innate talents and interests of our people and our organizations. Because this is an intentional effort, staff development requires planning and an investment of resources—both financial and non-financial.

In her contributing article, *Staff Development and Creativity*, Felicity Snyder leads us through ways to engage staff in thinking and acting more creativity. In addition to defining creativity, Snyder advises us on how to prepare to implement creative activities in the workplace while fostering a safe space for learning to occur. Much of the guidance builds on our current practices, reminding us that “creativity is innate, but sometimes it needs to be ‘re-learned.’”

Also included in this update is an article by David Lynch on financial planning for staff development. *Budgeting Professional Development for Sponsored Research Staff: A Scaled Approach* offers advice on planning for, implementing, and sustaining staff development activities. To maximize limited funds available to support operations, Lynch emphasizes identifying needs, setting expectations, and establishing guidelines when budgeting for development activities.

We hope you find this update on leadership and staff development innovative as well as practical for supporting your staff in their personal and professional growth.
**4101.14 Attributes of an Effective Leader: Practice Makes Perfect**

Humanity  
Humility  
Integrity  
Vision

These are just a few of the attributes common to effective leaders. These attributes show up time and again in books, on the Internet, in leadership development courses, and in numbered lists from three to a dozen or more. They have been tested and incorporated into practical leadership guides, like the one explored in this update’s first article, “Challenging Traditional Ways: Leadership, Trust, and Reducing the Administrative Burden,” (Mills et al.). They have been put into practice by millions of people around the globe. But it’s not just the attributes that matter; it’s the practice, perception, and results of those attributes that ultimately determine a leader’s effectiveness.

In the article, Mills et al. guide us through “The Five Practices of Exemplary Leadership,” (Kouzes and Posner), giving us an overview of each practice coupled with real life examples of each practice in action. To top things off, the authors issue leadership challenges throughout, inspiring us to flex our leadership attributes and encouraging us to make a difference as we travel on our leadership journeys.

In her article “Authentic Leaders, Effective Leaders,” founder and President of Candid Culture Shari Harley states, “People want to work with other real people,” reminding us that it’s the real-life practice of the leadership attributes that make a leader effective.

And rounding out the update is an insider’s perspective on “Women in Leadership,” by Suzanne Rivera of Case Western University. While the attributes of an effective leader show up in the media time and again, Rivera reminds us that how we put our leadership skills into play and how they are perceived may vary by gender, culture, and other factors outside our control (or are they?).

This leadership update reminds us to own our leadership attributes and hone our leadership skills, so that we can help our teams achieve amazing results.

“Effective leadership is not about making speeches or being liked; leadership is defined by results not attributes.”

— Peter Drucker
¶4101.15  **New Leader’s Resolutions**

Tricia Callahan, Director of Proposal Development, Office for the Advancement of Research & Scholarship, Miami University

Each New Year nearly half of Americans resolve to better themselves in one form or fashion, whether it be through saving money, reducing stress, or improving their overall health. Studies show that less than half are still on target six months into the year and likely no more than 15% will achieve their New Year’s resolutions. Reasons for failure include unrealistic goal setting, lack of follow-through, and simple forgetfulness. Those who are successful are found to be more committed to effecting change and have developed effective strategies for implementing change.¹

This update is focused on goal setting for leader-managers and on practices for conscious leadership. In her opening article, Kerry Peluso, Associate Vice President for Research Administration at Emory University, explores “Managers as leaders: Delivering the WHY?” Peluso emphasizes that moving beyond the what, when, where, and how of leadership to the “why” is important to becoming an effective leader. According to Peluso, successful leaders seek to better understand leadership, plan for (and own) their leadership development, and continually develop themselves as leaders. In other words, successful leaders are committed to effecting change.

In a related article, NCURA’s Tara Bishop provides the tools for developing effective and conscious strategies for implementing change. Bishop likens the tools shared to garments in a dressing room that can be taken out and tried on, one at a time, as we intentionally and mindfully travel on our leadership journey.

While resolutions can be easy to make, studies and personal experiences show they can be difficult to maintain. So where do we begin? Bishop suggests that, “[a]s with any change we are hoping to create, we start with ourselves.”

We hope this update adorns you with a myriad of garments you can try on as you commit to achieving your New Leader’s Resolutions and develop strategies to make them reality.

“A true leader walks the path of the heart and inspires others to work towards the creation of a better world.”

— Roxana Jones, co-creator of HealThruWords®

Leadership Lessons from Academia

Research administrators support grant seekers throughout the grant cycle, ensuring project goals and funders’ regulations are met. During our daily work with faculty, staff, students, and colleagues, we face challenges and opportunities, whether we are leading or being led.

“Being a leader has less to do with position and title and more to do with having or attaining the main characteristics of a great, successful leader... These characteristics are not stand-alone—they interconnect.”¹

But just how does one go about identifying leadership traits and honing leadership skills? In this update, Dr. Jim Oris, Associate Provost for Research & Scholarship and Dean of the Graduate School at Miami University, shares about opportunities for leadership development he’s encountered in his career—from time spent in the lab, to teaching, to leading his peers, to now leading a professional staff of over 20.

Following Oris, Dr. Megan Gerhardt, Professor & Co-Director of Miami University’s Center for Business Leadership, rounds out this update by sharing her vast knowledge and practice on leading others to identify and strengthen their leadership traits. The focus of Gerhardt’s article is on pinpointing one’s talents while managing weaknesses to become part of a successful, well-rounded leadership team.

The academic flavor of this update blends years of research, inquiry, and experience to help us identify and strengthen our leadership skills, while reminding us that we are never too seasoned to learn new things.

“…every single person is in a position to be a leader even if they are not the head of an organization and do not have direct reports.”¹

— Miriam A. Campo, The University of Tennessee, Knoxville

¶4101.17  Sport Leadership: Lessons Learned

As a head coach of a team, success comes from being able to inspire a group of people to achieve a common goal. An effective coach, like any effective leader, must be able to bring out the best in her players and does so by understanding the skills that each player brings to the game. While the goals of any team - whether it be volleyball, baseball, or research administration - may vary, success comes from having an organized leader who can inspire confidence and who can effectively guide team members through to the goal.

In her article, “The Sport of Leadership,” Katherine Durben, the Executive Director of the Office of Research and Sponsored Programs at Marquette University, shares analogies between leading a sports team and leading in research administration. Effective leadership takes teamwork, knowing and understanding the rules, developing a strategy, being willing to fail, and having a genuine love for the game.

“Leaders and great players are leaders and great players no matter what ‘sport’ they play.”

— Katherine Durben

In a related, follow-up article, Sue Kelch, Senior Financial Analyst in the Department of Otolaryngology at the University of Michigan, discusses being a good sport in addition to being a good leader - or rather how good leaders are also good sports. While good leaders must be willing to fail, the best leaders fail with grace and dignity. As importantly, they learn from their failures and model the way for others to succeed.

“As professionals, we need to prepare how to lead effectively for both outcomes; not only as the winner but as the ‘also-ran,’ ‘runner-up,’ or dare we say ‘loser.’”

— Sue Kelch, University of Michigan

Batter up!
¶4101.18 The Art of Communication

“The art of communication is the language of leadership.”

– James Humes

This quarter’s update is about the complexity leaders face when communicating in today’s multi-generational workplace. This workforce includes the Pre-Boomers (born 1925-1945), Baby Boomers (born 1946-1964), Generation X (born 1965-1976) and Generation Y, also known as Millennials (born 1977-). Such diversity has huge implications for employers in terms of managing people with varying needs, backgrounds, priorities, expectations, and attitudes. Leaders need to avoid expanding the generational divide, while remaining cognizant of the real differences in the ways employees learn, work, and communicate. To help us navigate these complexities, Carolin Munro, professor and consultant, offers tools for building relationships and breaking through communication barriers. Munro recommends first identifying the top communication crushers in our organizations: devaluing others, dominating conversations, and using evaluative language. Second, she recommends learning to connect in meaningful ways: engaging through inquiry, showing our imperfections, and seeing the possibilities in our differences. Finally, Munro suggests reflecting on what has worked and what needs improvement.

Using the simple tools offered in this update will allow us to recognize and break through our communication barriers. It will also empower us to learn from our mistakes, own up to our imperfections, and bravely take the first step in connecting with others. It is Munro’s hope that we learn to “connect in extraordinarily semi-perfect ways.”

It’s up to you to take the first step.
The essence, health, viability, and success of any organization, be it a private corporation, non-profit, university, even government, is in the way that its employees are treated. If employees are treated with respect, fairness, appreciation, understanding, flexibility, and are compensated equitably, financially and with good benefits, they will feel valued, be more productive, acquire a sense of belonging, and possess strong allegiance to the organization. Employees should not be thought of as commodities that can be “bought”, “used”, and “discarded”, but rather as assets in human capital. But what exactly is human capital and how does it relate to research administration?

What is Human Capital?

Human capital has been defined in various ways. Coff (2002) offers a very restrictive definition of human capital by referring to “knowledge that is embodied in people”\(^2\), whereas a much more encompassing definition is offered by Wikipedia; it is “the stock of competencies, knowledge, and personality attributes, including creativity, embodied in the ability to perform labor so as to produce economic value”\(^3\). The United States General Accounting Office (GAO) defines human capital as “people”\(^4\). But the GAO also follows its definition by stating that “people are assets whose value can be enhanced through investment” and the “organization’s human capital policies must be aligned to support the organization’s ‘shared vision’—that is, the mission, vision for the future, core values, goals and objectives, and strategies by which the organization has defined its direction and its expectations for itself and its people”\(^3\).

We are sure that there are additional variations on the definition of human capital. Regardless, this team of a research administrator and faculty member uses the terms “people” and “human capital” interchangeably, where human capital does extend beyond the individual’s knowledge and it includes his/her technical expertise, abilities, interpersonal relationships, and personality, especially responsiveness and adaptation to dynamic work-related, personnel, and organizational evolutionary changes. More importantly, we believe all aspects of human capital are interrelated and therefore the metrics of human capital are intrinsically linked to the productivity and ultimately the success of any organization.

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1 This article is reprinted from the NCUIRA Magazine, Volume XLIV, No. 4, August 2012, published by the National Council of University Research Administrators. It is used with permission of the publisher.
3 http://en.wikipedia.org/wiki/Human_capital
If this is true, the goal of any organization should be to utilize those assets efficiently to maximize their impact so the organization’s success (as a measure of productivity or performance) can then be proportionally amplified and replicated. But how does any organization, particularly a research administration operation, go about “right sizing” its human capital and utilizing what is available to it in order to be “successful” and achieve its mission, core values, goals and objectives, strategies, and vision for the future?

Three Factors to Enhance Human Capital

As an organization evaluates the human capital it currently has or learns what it needs, leadership experts suggest there are three factors that commonly enhance human capital. First, an organization needs visionary leaders who assess the landscape related to employee commitment, morale, and motivation and who promote continuous improvement models. Second, key to the environment is a network of relationships and trust amongst colleagues that must be well understood so that collaboration and creativity can provide co-workers the opportunity to exercise influence. Third, culture and leadership styles must become important foci because hiring and employee development (beyond skill sets) affords an organization the flexibility it needs to adapt and respond to a dynamic and changing environment.

These factors are critical foundational components in the strategic development of an organization’s most important asset—its employees. Successful leaders conduct early and continual assessments of their organization’s human capital and respond accordingly. Given the current landscape of the ever-changing field of research administration, leaders must continually refine and set metrics by which to evaluate their “assets”. Knowledge, skill set, character, integrity, priorities, reputation, experiences, professional affiliations, and association memberships are just a few aspects of an individual to be considered carefully in relation to human capital components necessary for team building. Regardless, an employee who is transparent, trustworthy, and never compromises on the delivery of the best service and support within the organization validates the underpinnings of the organization’s human capital.

Recruitment, Retention, and Leadership

Recruiting the best and brightest and retaining competent employees is a challenge but as experts agree, top talent and people in critical roles are always in demand, and they are expensive and difficult to replace. Investments in recruitment and retention must be given top priority to solidify long term commitments from employees and in order to meet the organization’s mission and critical objectives. Failure to invest in the recruitment and retention of the best and brightest will only serve to send the wrong signal throughout the organization, one that simply says, “We are unwilling to invest!” Similarly, the devaluation of human capital can result from the loss of an individual that is well respected and admired within the organization as workforce morale can suffer because the harmony of the work environment is

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Leaders interacting and connecting with employees directly is equally important to a research administration office that seeks to stabilize and strengthen organizational and interpersonal relationships as well as promote enhanced human capital. Leaders within the organization who are visible, optimistic, and confident and who communicate with their employees, even when there aren’t major milestones to report on, promote feelings of mutual respect which engenders loyalty and trust. Managers who provide intellectual stimulation and active mentoring/guidance in the workplace foster a collegial, entrepreneurial environment which helps the organization realize process improvements and efficiencies to gain a competitive advantage.

**Evaluation**

Every organization should periodically examine itself under a microscope, evaluate all of its assets to identify gaps, and plan resource requirements and allocations to achieve its mission and critical objectives. The combination of: a) the need to identify knowledge, skills, abilities and behaviors required to support the organizational mission; b) the ability to measure the extent to which employees have them; and c) the wherewithal to identify gaps and implement training programs to address those needs all play a key role in how the organization develops its human capital. This is also a critical measure of the organization’s success or failure. Part of the iterative and evaluative process by which employees can further seek growth is through the conduct of a performance evaluation. There are personal and professional development benefits (e.g., knowing their own strengths and weaknesses) to employees who participate in the process on an annual basis and those individuals are more suitably positioned to improve their performance and help to achieve organizational and institutional goals.

**Stress Management**

Without a doubt, as the world of scientific discovery continues to increase in diversity and complexity, the only constant in research administration is change. The fast pace of information and instantaneous communication flow places stress on human capital within our organizations. Stress levels of individual employees and groups within the workforce must be managed. Organizations should aim to capitalize on a “work hard”, “play hard” culture if it expects to be able to proactively respond to the equally fast-paced work ethic of the faculty it serves. An organization that is proactive in mitigating negative impacts to its human capital is one that recognizes the need for stress management and deals with it in a direct manner. Organizations focused on team building and promoting work/life balance for its employees benefit from strong human bonds and a collegial and entrepreneurial environment.

**Organizational Structure**

Given today’s complexities, another factor to be considered which plays a significant role in the management of human capital is organizational structure. Is a centralized or decentralized model best? Clearly, there are advantages and disad-
vantages to both approaches that arise and each organization must decide how to approach this aspect of operation depending on the responsiveness of its workforce. For example, if the organization recognizes early on that its workforce possesses the appropriate knowledge, skill set, character, integrity, priorities, reputation, and experiences to achieve success, then it can certainly support a more decentralized model and foster independence. In contrast, if the organization evaluates its human capital and identifies substantial weaknesses and gaps, then clearly it needs to take a centralized approach to management to ensure that its workforce is appropriately mentored and trained and costly mistakes are avoided. Implementation of centralized and decentralized management can and have been converted from one to another as workers become well trained, productive and independent by gaining confidence in their work and as the human capital of an organization develops specialists and generalists.

One Size Almost Never Fits All

So how does your research administration office “right size” its human capital to achieve its mission, core values, goals and objectives, strategies, and vision for the future? One size doesn’t fit all, but the exploration (a SWOT [Strengths, Weaknesses, Opportunities, Threats] Analysis) of your institutional/organizational culture and beliefs about human capital and the assets to the organization remains at the core of both the questions and answers. While this article focuses on research administration, the same can be very easily applied to academic departments and yes, even down to individual principal investigators training the next generation of scientists.

This team of human capital comprised of a research administrator and faculty member leaves you with inspirational words from Lowell Milken that both capture the essence of our philosophy and leave us hopeful for the future of science and those who dedicate themselves to advancing it: “There is something inherently optimistic about the fact that we can create and foster what our society [organization] most needs in order to flourish. And in this age of uncertainty, it’s a good thing to know that far from being finite and nonrenewable, the world’s most important resource—human capital—is limitless and generative. It is up to each of us to make the most of the opportunity.”

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6 http://www.lowellmilken.com/Lowell-milken-quotes/featured/
dics and Genetics at Stony Brook University. Previously, he has served as Graduate Program Director and Associate Vice President for Research. He is a member of the American Society for Bone and Mineral Research and the Federation of American Societies for Experimental Biology and serves on the Editorial Board of a number of scientific journals.
4120.2  You Mean it’s Not All About Me? Building Relationships using MBTI¹
Theresa C. Partell, SUNY at Binghamton University, and Candyce C. Lindsay, Arizona State University

With research administration changing at such a rapid pace, promoting effective work relationships is essential to our interpersonal and organizational success. By gaining awareness and appreciation of the different ways you and your colleagues prefer to process and act on information within your environment, you can learn to work more effectively and become a better leader. In his book, Type Talk at Work, author Otto Kroeger writes about the importance of understanding those around us so that we may connect quickly to solve the problems at hand. He states that “success at any level requires that you must rely heavily on others and be tuned in to each individual’s needs, preferences, and styles.”

One tool that can help research administrators acquire such awareness and appreciation of others is the Myers-Briggs Type Indicator (MBTI). NCURA’s Leadership Development Institute (LDI) uses this tool to help research administrators learn to understand why people act or say the things they do and, as a result, interact more effectively with faculty and colleagues in their institutions and communities. After completing the assessment online as a homework assignment, LDI students share their results and learn how the knowledge of others’ styles can make a difference in their work.

The MBTI is one of the most commonly used assessment tools today. Developed over 60 years ago by Isabel Briggs Myers and her mother, Katherine Cook Briggs, the MBTI is based on psychologist Carl Jung’s theory of personality types. The tool provides a framework for understanding why people behave and think the way they do. The MBTI indicates one’s natural preferences along four scales:

◆ Extraversion or Introversion: Whether you get your energy from the world of people and things (E) or from the reflective inner world of images and ideas (I)
◆ Sensing or INtuiting: Taking in information by attending to facts, details and the present (S) or by attending to patterns, themes, possibilities and the future (N).
◆ Thinking or Feeling: Making decisions by objective, facts-based analysis (T) or by subjective, values-based analysis (F)
◆ Judging or Perceiving: Dealing with the outside world by being decisive, planned and orderly (J) or by being more flexible, open and spontaneous (P).

Each of these four dimensions is made up of a pair of opposite preferences or “dichotomies,” all of which are valuable and are used by everyone at least some of the time. This results in sixteen possible psychological types, each having different strengths and areas of growth. However, Myers and Briggs theorized that individuals naturally prefer one dichotomy, using it more than the other.

¹ This article is reprinted from the NCURA Magazine, Volume XLI, No. 2, April/May 2009, published by the National Council of University Research Administrators. It is used with permission of the publisher.
It is important to note that there is no “right” or “wrong” personality type; there are only differences. Individuals are unique, each with their own combination of personality preferences, interests, values, talents and skills. Kroeger teaches people to apply the knowledge from the MBTI model to celebrate these differences and use them constructively rather than to create conflict. It helps us understand that we all have different preferences and ways of thinking, thus enabling us to objectively view actions that we might previously have taken personally. Once the MBTI is administered and you understand and confirm your four-letter ‘type’ (ISTJ, ESFP, etc.) you can appreciate your innate strengths and recognize possible weaknesses or blind spots. Knowing your MBTI profile allows you to seek opportunities that capitalize on your strengths and develop skills in your areas of growth. Furthermore, the MBTI can help you gain a perspective on others’ personality types and what that means for your effectiveness, and theirs, and your interactions with each other. For example, an Introvert who prefers to do things independently, think things through before speaking, and work quietly, might be interested in knowing that her extroverted colleagues could be misinterpreting her as aloof and uninterested.

By improving our understanding of the needs and behavioral preferences of the people around us, we can learn to promote collaboration and reduce conflict by defining problems in typological terms rather than interpersonal ones. Anita Mills, a 2007 LDI graduate and Associate Director of Research Administration Training at New York University, finds that this level of self-awareness has enabled her to create a productive workplace environment that allows conflicts to be dealt with more easily. Utilizing the MBTI has helped her to relax and have fun with individual differences, while at the same time continuing to move projects forward. MBTI knowledge can also be used as a powerful team-building tool. It can help identify your team’s strengths as well as areas for growth, and assist you in developing a plan to further improve the interaction and, thus, the effectiveness of your team. Understanding individuals in your team whose preferred behaviors might be different from the others can improve your team’s overall effectiveness and productivity. According to Kroeger, preferred behaviors will emerge very early in a group’s formation and such behaviors will tend to support the typological needs and tendencies of the group members. He asserts that the goal for any successful group is not to change or neutralize individual members’ preferences, but to use this knowledge in an effort to maximize the effectiveness of the group. An astute leader will utilize the group’s typological information to ascertain how decisions are made and what level of information is needed to make such decisions.

◆ First, by looking at the EA distribution, the leader can identify what effect these differences will have on general interaction among the group members. When faced with a decision, Extraverts typically seek out guidance and support from others — they prefer to talk things through and use the energy they gain from others to help make their decision. Introverts, on the other hand, prefer to be alone so that they can process their thoughts — they tend to use introspection when making decisions.

◆ Second, by looking at the group’s SIN distribution, the leader can identify the
group’s dominant need for receiving information, be it detail-oriented or big picture. Sensing people choose to rely on their five senses — they prefer to gather data and focus on the here and now. Conversely, iNtuiting people trust their intuition — or “sixth sense” — and prefer to rely on themes, patterns, hunches and impressions in order to understand things or people.

◆ Third, by looking at the group’s T/F distribution, the leader can identify the group’s most-preferred decision-making style, be it based on logic or based on feelings. Thinkers base their decisions on objective criteria — they are more interested in finding practical solutions and making decisions quickly. Feelers, on the other hand, base their decisions on values, emotions and effect on people — they trust their gut and care about how their actions will make others feel.

◆ And, finally, by looking at the J/P distribution, the leader can better balance the process for making decisions with making the decision itself. Judgers are decisive and product-oriented — they can analyze the pros and cons of a situation quickly — while Perceivers are process-oriented and in search of alternate possibilities and solutions.

Leaders who have used the MBTI know what a difference it can make in their ability to work well with others and improve team relationships. With this new knowledge, leaders can begin to recognize the variations of the personality types and the importance that such diversity brings to the workplace. Furthermore, once leaders understand why they do things a certain way, they can learn to appreciate how others may interpret their actions. Many people who participate in this powerful self-understanding process discover a new self-worth and personal belief in their own abilities and potential.

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Playing to Your Strengths: Bringing Out the Best in Both Introverts and Extroverts

Erin Bailey, Buffalo Center for Social Research, Julie Guggino, Central Washington University, and Samantha J. Westcott, University of California, Irvine

Demanding leadership challenges in both work and personal relationships often originate from the personality differences between introverts and extroverts. How many of us have been in a meeting with individuals who are quick to respond, often talking over one another or talking over anyone who speaks? At that same meeting, others may sit quietly, seemingly taking everything in, or appear bored or overwhelmed. Meetings and other workplace activities often fail to be productive when conflicting personalities contribute to a breakdown in communication. Neither personality type is better than another; however, learning to successfully lead your team to coalesce where all members play to their strengths and understand how to work together can lead to greater success for the entire organization.

Tips for Extroverted Leaders

Be concise. While you are invigorated by talking, are energized by interruptions, others may consider you overbearing and overpowering. Circulate information ahead of a meeting. Provide as much written information as is feasible before a meeting so that introverted team members have a chance to review the material in order to give you their best thinking.

Don’t expect immediate decisions. Pressuring introverted team members to come up with a decision on the spot may likely result in a decision that they don’t fully buy-in.

Allow silence its moment. A common complaint of introverts about Extroverts is about their listening skills—in particular, their rush to fill the silence. Practice self-management by valuing pauses which allow the real conversation to be heard.

Ask introverts for their thoughts. Introverts generally dislike having the light shining on them, so you may have to seek out their opinions. It is often more fruitful to meet one-on-one rather than in a public forum.

Respect introverts’ need for privacy. Practicing good social awareness skills entails understanding that extended extroverted activities can be draining for introverts.

Tips for Introverted Leaders

Give visual clues when listening. While introverts are often better listeners, their ex-

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1. This article is reprinted from the NCURA Magazine, Volume XLIII, No. 10, May/June 2011, published by the National Council of University Research Administrators. It is used with permission of the publisher.

pressions may sometimes give the impression that they lack interest or involvement in the topic being discussed. Remedy this with simple things like a nod, a smile, and leaning forward—micro gestures that go a long way to signal to others that they are indeed being heard.

Raise your comfort level with public speaking. If public speaking ranks among one of your top dreads, resolve to conquer this. Developing the ability to stand up in front of an audience to deliver an engaging presentation is a strategic imperative. Lee Iacocca once said: “You can have brilliant ideas, but if you can’t get them across, your ideas won’t get you anywhere.” Develop the skills to help you share your brilliance with a wide audience.

Beware of voids created by non-communication. A void will be quickly filled by rumors, misinterpretations, and grapevine musings. Take the initiative to share information.

Provide timely feedback. Consider voicing your opinions sooner. Providing critical feedback once a project is well underway can frustrate or de-motivate others on the team.

Learn the art of small talk. If this is not a preferred activity for you, consider that small talk is the oil that lubricates relationships and paves the way for more important discussions.

Share more personal information. This helps more people know you better and increases the level of trust. Transparency strengthens our connections to others.

**Introverts and Extroverts 101**

The terms “introvert” and “extrovert” may be defined as follows: “(1) Introvert: An individual in whom exists an exaggeration of the thought processes in relation to directly observable social behavior, with an accompanying tendency to withdraw from social contacts. (2) Extrovert: An individual in whom exists a diminution of the thought processes in relation to directly observable social behavior, with an accompanying tendency to make social contacts.”

Since 1975 the Myers-Briggs Type Indicator (MBTI) has been used for psychological assessments and as a self-exploration tool. It considers four personality preferences:

- Extroversion/Introversion: how people derive their energy;
- Sensing/Intuition: how individuals perceive the world around them;
- Thinking/Feeling: how individuals make decisions; and
- Judging/Perceiving: how individual’s public personas, or outer world orientation are viewed.

In this article, we will discuss the Extroversion/Introversion personality preference. As with many aspects of the human personality, introversion and extroversion spectrum can be seen as a continuum.

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Each individual’s preference falls somewhere along the continuum. Introverts are internally-directed. An introvert needs time to reflect, appears reserved, contained, and guarded in public. Introverts are often considered “deep” by others. The introvert typically thinks before speaking. Extroverts, on the other hand, are externally-directed. An extrovert is often action-oriented, appears gregarious, expressive, and unreserved in public. An extrovert typically needs to speak to think. These observable behaviors intuitively make sense when some of the physiological differences between extroverts and introverts are examined. With newer technologies like brain scanning and mind mapping, scientists are beginning to identify physiological differences. Introverts, for example, have a longer neural pathway in their brains and more blood flow to the parts of their brains related to internal experiences like remembering. Extroverts’ blood flow, conversely, is increased in the areas of the brain supporting sensory input: seeing, smelling, sensing. Introverts and extroverts also rely on different neurotransmitters. Extrovert pathways utilize dopamine differently than do introvert pathways whereas introvert pathways utilize acetylcholine.

**Introverts and Extroverts in the Workplace**

With such a broad spectrum of personality types ranging from the most reserved to the most outspoken, respecting one another’s work styles and finding ways to accommodate the continuum of personality types will result in greater job satisfaction and increased productivity. We will explore opportunities where leadership can bring out the best of everyone on the team. In meetings, for example, while introverts may find meetings stressful and often times draining, extroverts may see meetings as a way of being productive: a way to energize their batteries and energize those around them. For many introverts, their voices will be heard later, sometimes much later, after they have had a chance to examine all the facts and come up with a sound and informative answer. The leadership necessary for making successful meetings begins with awareness: the leader who can see those quietly biding time and find opportunities to make sure their voices are heard will enrich the interactions in meetings. With proper planning, effective leaders can intervene and create conditions that bring out the best in both the introvert and the extrovert and lead to more productive, effective meetings. Setting a tone and stating expectations for meetings can help curb the distraction or talking over and allow each voice to be heard. All those on the spectrum benefit from one another being a party to the meeting. The introvert needs the spontaneity and energy of the extrovert to start discussions and bring ideas to the table; while the extrovert learns to value the introvert’s ability to look at all the facts and problem solve.

In day-to-day interactions, consider some of your colleagues - you can probably name those who get their energy being around people. Those team members are likely extroverts. When extroverts are faced with a problem, they like to bounce their ideas off others. The extrovert may pick up the phone and call someone or drop by a colleague’s office. They have a need to connect with people. They externally process information and thrive on the energy from others to solve their problems. Extroverts are typically vocal, spontaneous and comfortable expressing
their ideas. Introverts, on the other hand, get their energy from working alone and processing information internally. When faced with a problem, introverts need to gather all the facts and need time to process the information before giving an answer. To work most effectively, introverts need to have a space where they can retreat and work quietly. They dislike interruptions and are content to work alone. They don’t mind working on long, complex, even tedious, projects. Extroverts can more easily adapt to open concept office environments and may actually increase their productivity due to the constant interactions. They are more welcoming of interruptions and physically move around more. They are quicker to become bored or impatient with repetitive tasks.

Effective Workplace Leaders: Introverts or Extroverts?
A good leader can be anywhere on the spectrum: from the shiest introvert to the most outspoken extrovert. Outgoing personality traits are often associated with top leadership roles. They are the ones seen as outgoing, assertive and excellent at giving directions. However introverts can also be great leaders with their attention to detail, listening skills, and their ability to think through issues in a more focused manner. Research suggests many businesses fail when they do not promote executives with more understated styles. Both introverts and extroverts have various talents and strengths and neither should focus on what they are not. Successful leaders know they are not perfect at everything nor do they want to be, hence they select team members who compliment their challenge areas as well as having a strong track record.

Effective leaders who are aware of the interpersonal dynamics of the members of their team can help alleviate problems based on the differences between introverts and extroverts. There are often assumptions or misunderstandings that occur when individuals come from different personality types. The two different types are diverse in the way that each processes information. If a person is rewarded for participating in meetings in an office, it can create tension for those who find it uncomfortable to speak up in meetings. On the contrary, if the atmosphere is unwelcome to those who think creatively in the moment and who may stray off-topic to follow a train of thought, it can stifle some of the ideas of those who work best when in a group setting. The best listeners in a group are not often the ones who share openly and their contributions can be missed. A lack of response may be misread as a lack of interest by someone who is openly sharing ideas and working within the group. Sometimes, conflict can be extended beyond what is necessary to solve it due to a need to talk everything out by some in the team. Other times, conflict avoidance can be detrimental, as key problems do not get addressed if they are not brought to the surface.

Given that effective leadership is not tied to a specific personality trait or type, the benefit of accepting the different personality types exists in how a leader both understands himself and how he understands and works with his respective team members. A major portion of a leaders’ role is communication, so it is very important for leaders to understand how their employees’ process information, so the
leader can adjust their approach to fit their audience needs. Also the leader with this insight can create a safe space in meetings to seek input from those who may be reluctant to speak. Through the resulting diversity of thoughts shared, the end result likely will be more effective and have greater buy in by the entire team.

A leader’s natural style will also offer enhanced development opportunities to the team members. Since a leader’s success is normally a direct result of his team members’ success, everyone wins when everyone’s strengths are leveraged. A leader who is on the far extreme end of the extroversion side of the scale may offer his team the networking and interpersonal skills that make connections to effectively improve business. A leader who is extremely introverted may offer his team the benefit of long-range strategic planning and written communication skills. The extrovert can lead those team members who are not as likely to stand up to opportunities to shine by connecting them to projects for which they would not volunteer. The introvert can lead those team members who are outspoken to more introspection by modeling the benefits of taking the time to make a thoughtful decision.

The differences in personality types are real and they matter. The contributions of the individual to the team are best when the individual can work at his best. While it is impossible to create an ideal environment that works for all members of a team all the time, knowing how each works best and providing those opportunities for the team member to thrive and do his or her best is the job of the leader. Giving the introvert the time to think, work independently, work quietly, and to get the job done right is key. Offering the extrovert the time to connect and work with others, to listen to others, and try doing things differently than before while still meeting the deadline can lead to success. Furthermore, forming teams that are balanced and sharing the expectations up front of how the team will work together and use their strengths to achieve the goals can offer the chance for every member of the team to share in the success.

Bibliography


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4120.4 **Mentoring**

Govind Narasimhan, University of Texas M.D. Anderson Cancer Center, Margarita Cardona, University of Baltimore, and Randi Wasik, Texas Christian University

The world of research administration is changing almost as rapidly as the research we support. As we face increasingly tighter fiscal constraints locally, uncertainty at the federal level and the disappearance of AREA funding, the organizations whom we serve and our peers who are in this “quicksand” playing field with us must grapple with the challenges of the economy, complex and ever changing regulations and goals set for us at all levels. For research administrators, mentoring continues to emerge as a viable alternative to conferences and other more costly professional development opportunities.

**Traditional and Non-Traditional Methods of Mentoring**

Traditional peer-to-peer relationships meet these individual needs, but increasingly there are also less traditional ways to mentor, such as via professional organizations; via higher ranking, more experienced managers; via similar organizations — i.e. university to university/similar positions; networking; group mentoring arrangements where a more senior leader will work with several high-potential learners; etc. Using an outside organization can be beneficial when the office is small. For those of us in the research administration environment, this can be the case more often than not even at large institutions. By using peers from surrounding institutions, one can further enhance their knowledge and career despite having limited resources close at hand. Professional organizations, peer institutions, and sometimes even our sponsors can serve as excellent resources.

**The Value of the Mentoring Relationship**

Mentoring enables one to be introduced into an organization, to be educated in a career for which, until recently, there was no formal training and to stay abreast of the massive amount of information that must be mastered. This said, our organizations increasingly recognize the value of mentoring and rush towards implementing formal and informal mentoring programs. They are beginning to view mentoring as a developmental stream, a reality of the workplace and an alternative to off-site trainings/conferences. Mentoring is first and foremost a relationship that meets the intrinsic values of the mentee and the mentor resulting in enhanced leadership skills and traits, wisdom and maturity that can lead to satisfying life experiences and objective decision making. It is all about the mentee, and the mentor has to view themselves as a caring friend, a role model and nurturer. After all, the mentee has entered into the relationship because he or she views the mentor in a special way, as someone the mentee respects and looks to for advice.

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Selecting a Mentor

When people seek out others to mentor them, they desire:

◆ Sponsorship that opens doors
◆ Coaching
◆ A measure of organizational protection
◆ Opportunities for greater visibility in the institution
◆ Challenging assignments that stretch one’s capabilities
◆ Role modeling of appropriate behaviors and values
◆ Counseling
◆ Support and acceptance
◆ Friendship that makes one feel secure and appreciated

Zachary (2009) proposes a criteria-based decision-making model to selecting a mentor in order to make the most of the relationship:

(1) Identify your goal — examine your background and career path and determine why you want a mentor and what is it that you want to achieve from the relationship.

(2) Create a list of criteria — identify those qualities that you would like to see in your mentor without having someone in mind yet.

(3) Determine qualities that are “must haves” — from the list you generate, select two or three qualities that would make or break the relationship.

(4) Rank the remaining criteria or “wants” — rank order the remaining criteria you want to see in a mentor in the order of relative importance to you, basically assigning them a weight.

(5) List possible options — Brainstorm a fairly comprehensive and open-minded list of possible mentors, taking into consideration that they do not need to work in your own organization.

(6) Eliminate options that don’t meet the “musts” — if an individual in your list does fare well against your must have criteria, eliminate them as an option, as they will not make a good mentor for you at this stage of your career.

(7) Rate each option against the “wants” — rate the candidates against the other criteria using a numeric scale. Weigh the scores based on the ranking previously assigned to each quality.

(8) Make the decision — if you have made an honest assessment of your candidates against your list of criteria, the decision can be as simple as totaling the scores

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and determining who came on top.  

(9) Along the way a third party should be checking in. Make sure regular meetings are being held/attended, what the participants feel is working and what is not and what else could be done/changed to enhance the relationship.

(10) Foster acceptance through listening

(11) Ask curious questions vs. accusatory ones

(12) Support and advice are gifts, both offered freely to be received with the understanding that they are just that — advice — it is up to the mentee how they will use this wisdom

(13) A mentor should bolster self-direction and independence — growth

Establishing a Healthy Mentee-Mentor Relationship

No matter what form of mentoring relationship is entered into, it should be a relationship from which both parties can learn, grow, share experience, and provide empathy and mutual support. Each form of mentoring relationship has its advantages and disadvantages. At a point in time when training budgets are dwindling, travel/conference dollars are tight, and loyalty isn’t what it once was, it might be necessary to enter into a mentoring relationship that is dynamic and may take on multiple forms across time to provide the most benefit. No matter what relationship(s) are entered into, it needs to be dynamic and evaluated/re-evaluated across time. As soon as it is recognized the relationship is not working, it needs to evolve and change.

It is important for a mentor to appreciate the mentee, their background, what they bring to the table and what they can themselves garner from this relationship. The mentor should not try to change the mentee into becoming “you.” It must be a relationship built on trust and viewed as a deliberate exercise in knowledge enhancement, sharing of wisdom by coaching and counseling that meets the mentee’s intrinsic and extrinsic values and expectations. As a mentor, one should approach the relationship with caution. While immediate work related gains like content expertise and skills of the mentee can be shaped, the mentee is looking to the mentor to contribute to her or his personal growth as well. Mentors should make every effort to relate to their mentees’ personal aspirations and assess early on in the relationship their ability to meet the mentee’s expectations. The mentoring relationship, whether formal or informal, must clearly establish expectations and be alert to signs of failure.

A supervisor and employee mentoring relationship is more complex and often fails because both parties fail to make clear distinctions between performance expectations and mentoring expectations. As a supervisor mentor, it is important not to make commitments that cannot be fulfilled, for example promotions, title changes, or raises. It is critical the mentor and mentee understand successful mentoring

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experience can lead to satisfying professional development and career paths, but it does not necessarily equate to promotions and pay raises within the work unit or the organization.

After the relationship is established, the most common error is walking away. There are no set guidelines, no check-ins, no change as the relationship and participants grow and develop no additional insight/opinions, etc. If the relationship does not meet the needs and goals of the mentee, the relationship will fail. Change and growth has to manifest itself through ongoing dialogue, response to growth, response to outside factors, etc. If this doesn’t occur, it is highly unlikely the relationship will achieve positive results.

It is critical for both the mentee and the mentor to buy into the relationship based on a deep-rooted sense of mutual respect and caring. For mentoring to succeed, it has to mean something personally to both the mentor and the mentee. It is very easy in our profession of research administration for the mentoring enthusiasm to quickly fade away. There are a multitude of stressors which face us on a day-to-day basis. To enter into this relationship — this agreement —whether in the one on one scenario or a group scenario, all parties have to buy in and commit. An informal contract where both/all parties sign provides a healthy formalization of the relationship. Once an agreement is entered into, goals and strategies should be established. They should not be “etched in stone,” but rather be a basis for the relationship to work and grow from.

One must remember that a mentor-mentee relationship is just that — a relationship. That said, for any relationship to work it should be equal, open, sharing, without judgment, and ever changing. The relationship needs to be open to change and expansion beyond its original nucleus. Always think and move within and outside the box to best grow, learn, develop, and reach and exceed your goals.

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There is good reason that the final articles read in NCURA’s Leadership Development Institute (LDI) and its successor, the Executive Leadership Program (ELP) are Level 5 Leadership: The Triumph of Humility and Fierce Resolve by Jim Collins and Leadership Run Amok: The Destructive Potential of Overachievers by Scott W. Spreier and Mary H. Fontaine. As with all good leadership development programs, NCURA’s begin with a focus on ‘the leader within’, helping participants learn and know as much about themselves as they can. Interestingly, often the more people know themselves, the greater the danger of blind spots that act as blinders that can derail them as they strive to lead others.

Collins describes what his research has found to be the pinnacle of leadership: those rare people who “blend the paradoxical combination of deep personal humility with intense professional will.” Among other characteristics, Level 5 leaders “demonstrate a compelling modesty” and act “with quiet, calm determination” relying on “inspired standards.” As someone who has studied leadership development and organizational dynamics for more decades than I want to enumerate, I have translated this concept into the importance of knowing one’s self as deeply as possible and seeking to understand how your internal motivations and natural preferences for knowing and doing may be different from those you seek to lead. Knowing this helps you manage your own behavior, communication and actions in ways that those you seek to lead can understand more easily.

Earlier articles in the NCURA Magazine by LDI/ELP graduates have highlighted the importance of ‘emotional intelligence’ in leadership development. Drawn from Daniel Goleman’s seminal work on the topic, self awareness and self regulation are two of the five components of emotional intelligence. In what is considered a Harvard Business Review (HBR) classic article, “What Makes a Leader?” derived from his book of the same title, Goleman defines self awareness as “the ability to recognize and understand your moods, emotions, and drives, as well as their effects on others” and self-regulation as “the ability to control or redirect disruptive impulses and moods and the propensity to suspend judgment, to think before acting.”

To self awareness, I add knowing your own strengths and stretches, your communication styles and problem-solving modes, and understanding how your life and the people in it have shaped your values and motivations. To self regulation, I add knowing your triggers and ‘calmers’, as well as knowing how the way you understand and deal with your world may be different from others and the effect those differences may have in the way you interact with them. After all, leadership is all about people.

In my leadership practice, I have found the Johari Window to be one of the most useful frameworks for self awareness and self regulation. Originally developed by Joseph Luft and Harry Ingham in the early ‘50s, this conceptual model has been used extensively for over 60 years by psychologists, organizational development practitioners, and coaches as a tool for personal growth. The Johari Window has
four panes, which I’ll review, going clockwise:

**Johari Window**

![Figure 4120.5-1. Johari Window](image)

- **The Public Area** depicts what you know about yourself that others also know about you (Figure 4120.5-1). The more you know yourself and can share with others so they know it, too, the larger this pane will become and the smaller the other panes will be. The theory is that the degree to which you and others know about you, the greater the trust will be between you and others because less is hidden. The foundation of leadership is trust, so the larger this pane is relative to the other panes, the better the chance that others will be comfortable with you as their leader. To make this pane larger, you need to disclose more about yourself to others, telling them what’s important to know about you and how you respond, communicate and lead.

- **The Blind Area** depicts your blind spot: what others know about you but you don’t know about yourself. In order to grow as a leader, you need to be open to learning how you are seen and experienced by others. The saying “perception is reality” is an important one to keep in mind as you seek to become more self-aware as a leader. To make this pane smaller and your public pane larger, you need to solicit and welcome feedback from others. You need to learn how effectively you are communicating and working with others, including learning from, and admitting to others, your mistakes. As importantly, you also need to
know where your leadership may be ‘going amok’ and driving others away. It’s easy to go into ‘overdrive’ without realizing that your behaviors might be counterproductive to the task of leadership.

◆ The **Hidden Area** depicts what you know about yourself but have kept hidden from others. It’s your ‘façade’ because it doesn’t reveal aspects about yourself that may be guiding your actions. Your behavior may not appear consistent with what you say you are, making you harder to read and, therefore, harder to trust. The more you share what you know who you really are and what drives you, the more others will feel they ‘know you’ as a leader and the more credible you will be to them. This may mean being vulnerable to others, but being willing to do so is important in what James M. Kouzef and Barry Z. Posner (The Leadership Challenge, www.leadershipchallenge.com) list as the first of five practices of exemplary leadership, that of Modeling the Way. The more open you are both in disclosure and acceptance of feedback, the more open others will engage in those behaviors to the benefit of your team.

◆ The **Unknown Area** depicts what neither you nor others know about yourself. Together, you and those you seek to lead can learn more about who you are. Through sharing your inner journey of leadership development and others sharing their observations about you, important discoveries can be made that will make you more effective as a leader. It is through this process that you may learn about your hidden talents. Often, it is through rising to the occasion during the most difficult and challenging times that such discoveries are made. Shrinking this window for a leader takes ‘fierce resolve’ and inner discipline. Indeed, one of the “truths of leadership”, according to Kouzes and Posner in their book of the same name is that “challenges are always the crucible for greatness in leaders.”

I believe, as do most practitioners in my field, that becoming an authentic leader that others want to follow is an ongoing process. Expanding the Public Area of your Johari Window can be an important quest in your leadership journey, the key to which is self-awareness along many dimensions. This includes reflecting and drawing from the story of your life and the people who have influenced you along the way. As you do so, always be cognizant of how unique you are as an individual and how those you seek to lead may be very different from yourself along many dimensions. Knowing your answers to these questions will also help you self-regulate.

◆ **Clarify your values:** what is most important to you, core to your very being? How do you live those values? In the HBR article, Discovering Your Authentic Leadership, the authors write “Leadership principles are values translated into action. Having a solid base of values and testing them under fire enables you to develop the principles you will use in leading.” Identifying and managing the gaps between your values and commitments is described well in another HBR article, Do Your Commitments Match Your Convictions by Donald N. Sull and Dominic Houlder.

◆ **Discover your motivations:** What drives you to action? What makes you want to achieve? What is most rewarding to you? In short, what makes you tick and why?
◆ **Learn your strengths:** What do you especially well and especially easily—and how do you know these to be true? (Over-confidence can be part of your blind spot.) What do you do that inspires others and enables them to act, two more of Kouzes and Posner’s five practices of exemplary leadership?

◆ **Know your stretches:** What is difficult for you to do and why? How does this affect your leadership? What do you need to learn to be more effective outside your comfort zone?

◆ **Know your emotional triggers:** What are your pet peeves? What causes you to feel like you are going off the deep end? What causes you to feel out of control? What are your pitfalls and stressors? What can you do to monitor and manage them? What calms you down?

◆ **Know how you learn:** How do you learn best? Are you someone who learns best by doing or by studying? Are you someone who learns more easily by looking back or by imagining forward? Do you understand best by looking at details or by looking at the big picture? Learning from an inventory like the Myers Briggs Traits Indicator (MBTI) can be very useful for such self-assessment.

◆ **Know when you are connecting…and when you are not:** How well can you read others to know that you are connecting with them in a way that they understand and can follow your lead? How can you be more aware of this? What can you do to alter your style when and as necessary? Many have found the DiSC instrument (Dominance, Influence, Steadiness, Conscientiousness) to be a useful tool in helping you understand how you behave in certain situations and how you can alter that behavior as situations change.

◆ **Know how to flex:** How might you adjust your communication style when you are dealing with someone who learns differently from you? How might you find ways to encourage the heart of others whose motivations and values might be different from others?

In *The 21 Irrefutable Laws of Leadership*, author John Maxwell describes the first phase of leadership growth as “I Don’t Know What I Don’t Know.” The Center for Creative Leadership in North Carolina, one of America’s preeminent institutes for leadership development (www.ccl.org), suggests questions for you to ask yourself in order to “lower your mask” so that you expand the Public Area in your Johari Window, thereby shrinking the Hidden and Blind Areas:

◆ What might be keeping you from trusting others?

◆ What needs to happen for you to be comfortable trusting others and what can you do to demonstrate this?

◆ What can you do to help others feel more comfortable trusting you enough to offer feedback?

◆ How can you show self-respect for others and what do you need from others for you to feel respected?

◆ How can you prepare yourself for being open to feedback that might not be
pleasant to hear?

The journey to become the allusive Level 5 Leader is an ongoing process. Peering intensely through the Johari Window and seeking to answer the many questions reflected in each pane is an inner journey that can lead you to your vision of leadership. It requires you to be ever vigilant and honest in your assessment about yourself, as well as to be constantly attuned to the ways in which you may be different than those you seek to lead, so that you can, as Arthur Ashe famously said “Start where you are. Use what you have; Do what you can.”

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¶4120.6  **Self-Leadership: The Life-Long Challenge**

Winnie Ennenga, Northern Arizona University

“One can have no smaller or greater mastery than mastery of oneself.”

*Leonardo da Vinci*

As leaders we’re responsible for building teams at the same time that we are team members in divisions which are themselves components of a larger whole. Anyone who leads, is led, or like most of us, does both, has by interest or sheer dint of necessity spent some time thinking about the qualities of great leadership: their own, those of their team(s), and those of the leaders they report to. In integrating these various roles within our universities and community and professional organizations, self-leadership is key to becoming a truly effective leader. Great leaders recognize that they have the ability to make choices and changes that impact their ability to be effective. Accomplishing this requires self-reflection and ultimately a commitment to selfleadership; that is, to lead ourselves in accordance with our values.

**Self-Leadership**

This is no small endeavor! From the Myers-Briggs Type Indicator (MBTI) personality inventory, to the five practices of exemplary leadership described by Kouzes and Posner (2012), and the leadership parables enshrined in *Who Moved My Cheese* (2002) and *The Five Dysfunctions of a Team* (2002), the consensus from the field of leadership theory is that great leaders become through rigorous daily practice and reflection that represent a lifelong commitment to strengthening core leadership competencies.

Presidential leadership has been a powerful theme during this election year, and I’ve been struck by the key importance of self-leadership in affecting the success and failure of candidates from across the political spectrum. In his first inaugural address in March 1801, Thomas Jefferson wrote that “Sometimes it is said that man cannot be trusted with the government of himself. Can he then be trusted with the government of others?”

For Daniel Goleman (1998), an indispensable component of what he terms Emotional Intelligence is self-regulation, or the ability to control one’s feelings and impulses that is essential for trust and foundational for integrity. This concept of self-regulation is at the center of the larger notion of self-leadership. Consider the case of Abraham Lincoln, who throughout much of his career used satire and invective against opponents. At a political gathering in 1840, for example, he so cruelly mocked and ridiculed his opponent, Jesse Thomas, impersonating him “in gesture and voice, at times caricaturing his walk and the very motion of his body,” that Thomas was reduced to tears and driven from the stage, weeping and politically vanquished (Bray, 1995). Wadhwa (2012) regards that moment, referred to as “the skinning of Thomas” as a turning point for Lincoln, whom she believes began

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slowly thereafter to change himself. But changing oneself is not easy, and similar behavior was recorded in ensuing years (Bray, 1995).

By the time of the Civil War, however, rather than giving free rein to his rage in public, Lincoln wrote what Doris Kearns Goodwin termed “hot letters” that were then set aside, unsent. In *A Team of Rivals* (2005), she describes one such letter to Major General George G. Meade regarding his failure in 1863 to capture General Robert E. Lee, the leader of the Confederate Army, in the wake of triumphs at Gettysburg and Vicksburg. Lincoln wrote “…He was within your easy grasp, and to have closed upon him would, in connection with our other late successes, have ended the war. As it is, the war will be prolonged indefinitely.” Obviously this letter would have greatly disturbed General Meade, and in the end, Lincoln placed the letter in an envelope inscribed “To Gen. Meade, never sent, or signed” (p. 628).

Most leaders demonstrate a mix of leadership strengths and weaknesses that can be tied to the notion of self-leadership. Although imperfectly accomplished, Lincoln’s deliberate effort to control his anger points to a high degree of self-awareness that stands in stark contrast to President Richard M. Nixon’s launching of the covert campaign against his perceived enemies that doomed his presidency. Even so, Nixon’s strength as a strategic thinker and his willingness to take risks enabled him to shift from a strong Cold War anti-communism stance to establish a relationship with the People’s Republic of China by the end of his first term.

Goleman and Boyatzis (2008) distinguished Emotional from what they termed Social Intelligence, with the latter incorporating such leadership qualities as empathy, articulating a compelling vision, teamwork, coaching and mentoring others, etc. Bill Clinton’s ability to empathize with Americans in his 1992 debate with President George H.W. Bush and Ross Perot contrasted sharply with President Bush’s apparent disinterest and impatience for the debate to end, highlighted by his checking the time on his watch, underscoring the feeling that he was disconnected from the problems of real people. However, even as President Clinton’s empathy enabled him to appreciate the real concerns and fears of Americans, impulsive and high-risk behavior in his personal life reduced his effectiveness in his second term.

Kouzes and Posner (2012) write that to become a credible leader, “You have to discover what you care about, what defines you, and what makes you who you are” (p. 48). That self-knowledge enables great leaders to communicate their ideas, make choices, and act consciously and with determination (p. 50). That, as these cases illustrate, is difficult to accomplish even with self-knowledge, and this is where self-leadership is most critical.

**Becoming a Great Leader**

Assuming the baseline skills of leaders already include mastery of technical skills and core competencies, great leaders distinguish themselves through self-leadership. Self-leadership involves thoughtful reflection on the qualities of exemplary leadership; a thorough inventory of one’s own leadership attributes – both weaknesses and strengths; and a *choice* and *commitment* to retool/rewire one’s thinking and one’s behaviors. Equally important, it also involves a commitment to better
understand, collaborate with, and empower others to act.

**What are the qualities of great leaders?**

Much is written about the qualities of exemplary leadership. To take but one example, for more than 25 years, James Kouzes and Barry Posner (2012) have asked the basic question “What did you do when you were at your personal best as a leader?” (p. 17). The responses to those questions led them to identify the *Five Practices of Exemplary Leadership*©. When leaders do their best, they Model the Way, Inspire a Shared Vision, Challenge the Process, Enable others to Act, and Encourage the Heart. A short list of leadership behaviors reflecting these practices includes setting a personal example, following through on promises and commitments, building consensus around the organization’s values, describing a compelling image of the future, setting goals and milestones to reach those goals, supporting decisions other people make, giving team members appreciation and support, and recognizing that team accomplishments are just that and not the result of a single person’s actions. Such lists are a good starting point from which to begin to examine one’s own leadership qualities.

Leadership programs offered by many universities or professional organizations (like NCURA’s Executive Leadership Program) are commonly designed to nurture leadership traits in individuals who have been identified as having the potential to lead their organizations into the future. These programs foster a shared vision of the organization, its operating principals, mission, goals, and objectives, and characteristically include significant participation by senior leadership.

**How do I measure up?**

Other good starting points include the MBTI leadership inventory of your particular strengths and challenges, as well as those of other individuals who differ from you. A thorough inventory definitely requires leaders to step outside their comfort zones to critically examine their own behaviors and also to invite such 360 degree assessments from others including your boss, colleagues, and staff.

The goal is to arrive, however painfully, at a realistic starting point from which to appreciate your strengths and begin to reshape behaviors in areas where you’ve identified weaknesses.

**What is my plan to become the leader I want to be?**

Just as external feedback is critical for developing a thorough understanding of your leadership attributes, the same may be true for identifying next steps. Take, for example, an intention to follow through on promises and commitments. Separating that goal into its component parts may reveal tendencies towards procrastination, taking on too many obligations, a reluctance to work as a member of a team, or to share/delegate responsibility to others, all of which indicate and acerbate distrust within and among team members. Self-leadership in this case begins with addressing these core trust issues. For Kouzes and Posner (p. 47), it is consistency between words and actions that builds credibility and thereby trust.
The good/bad news is that this is a life-long process that begins with one’s willingness to adopt new behaviors and commit to the daily practice of self-leadership. The inventory is the beginning; daily practice is the work of self-reflection and assessment of your leadership practices, and how they change, rearrange, and modify over time, whether leading your team or acting as a member of a team led by someone else.

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4120.7 The Incredibly Trustworthy Leader
Mary Louise Healy, Johns Hopkins University

Jumbo shrimp. Act naturally. Advanced beginner. A definite maybe. Conspicuously absent. Oxymorons all – apparent contradictions in terms that are nonetheless true. How about “collaborative leader?” Is this an oxymoron or simply a contradiction? Isn’t a leader supposed to lead the team rather than to collaborate with the team members in carrying out the shared mission?

Leader as Servant
Not so fast. What is leadership if not the building of trust and the enabling of cooperation among team members? Collaboration is essential to success because it allows for the free exchange of ideas that would not otherwise be possible. Collaboration requires a focus on accountability, solutions, and effective communication – all necessary to success (Heyman, 2011).

Servant Leadership – Collaborating for Success
Greenleaf (1977) described the concept of “servant leadership” as a leadership style in which leaders guide their organizations to better serve humanity, in which the leader first feels compelled to serve and then, through that service, to lead. The term “servant” seems counter to the idea of collaboration as well as to the concept of “leader,” and servant leader appears to be another oxymoron. But servant leadership relies heavily, and focuses heavily, on the interactions between the leader and the team members (van Dierendonck, 2010). It is based on respect for team members and on mutual trust, and on the ability to build community (Joseph & Winston, 2005). Because the focus of the servant leader is on the followers rather than on the leader him or herself, or even on the organization (Senjaya & Pekerti, 2010), there is an inherent reaching outward, an integral focus on collaboration. Kouzes and Posner state this same concept a bit differently: “The relationship between leader and constituent is strengthened when leaders are obsessed with what is best for others – not what is best for them” (2010, p. 15). Servant leadership relies on interdependence, mutual trust and respect.

It’s a Matter of Trust
Back to that word, trust. A simple concept with a simple definition as it relates to leadership: vulnerability. Mayer, et al. (1995) describe trust as subordinates’ willingness to be vulnerable to their leaders’ behaviors and actions that are beyond the control of the subordinates. It’s even fairly simple to understand why trust is an important aspect of leadership, a cornerstone of servant leadership, and why, without it, collaboration would be impossible. Trust itself is a collaborative construct. A leader may strive to be trusted, but that trust depends on how he or she behaves. One must

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prove oneself, through words and actions, worthy of trust. But trust also depends, and perhaps more so, on the team members’ willingness to make themselves vulnerable to — and place their trust in — the leader.

Simple, right? It’s easy enough to understand the importance and mutuality of trust but not so simple for a leader to inspire trust in those he or she is leading. How does a leader go about this? Zeffane (2010) believes that leaders must identify and share their values, on a day-to-day basis, and then act accordingly to allow those values to shine through. This builds trust: saying one thing and doing that same thing.

**The Five Practices and Credibility**

In order to build trust, it’s necessary to establish credibility. Kouzes and Posner (2002) describe five practices of exemplary leaders:
- Modeling the way and leading through your own example
- Challenging the process
- Inspiring a shared vision
- Enabling others to act
- Encouraging the heart

Combined, these practices create credibility. The leader who does what she says she will do, makes her beliefs and values known, and is willing to take risks as she works with the team to accomplish its goals is honest, authentic, credible, and thus trustworthy. And there is little that’s more important in a leader than honesty and trustworthiness. In a worldwide survey, Kouzes and Posner (2007) asked 75,000 people what characteristics they admire in a leader – what characteristics they look for in a person they would be willing to follow. They found that honesty was the single most important factor, chosen by 90% of respondents.

**The Path to Trust**

Be honest. Be credible. Act in concert with your beliefs and values. Others will trust you. This sounds great, but what are the concrete steps a leader should take to show that she is honest, to build credibility, to show herself as worthy of others’ trust? Wilson (2009) describes three practical actions leaders can take as they build trust:
- Speak with transparency. As Kouzes and Posner (2007) state as the first rule of leadership, “If you don’t believe in the messenger, you won’t believe the message.” Speaking with transparency allows others to believe you and means not only doing what you say you will do, but also being willing to share your thoughts, ideas, and feelings as well as facts. Wilson believes that sharing more rather than less is important and suggests leaders share twice as much as they think necessary (p. 51). It can be the case that a lack of trust is more attributable to what you don’t say than to what you do say.
- Keep promises and commitments. Each time you do what you say you will do, you show that you are worthy of the trust you are asking others to place in you.
- Balance competencies. Leaders need not have all the answers but must be able to
bring technical expertise and know-how together with leadership skills. They need enough technical competence to earn respect. Perhaps more importantly, they must be willing to acknowledge that they don’t have the answer when that’s the case.

Each of the five practices is apparent in these three actions. In addition to those practices, Kouzes and Posner (2007) also advise a congruency between the “say” and the “do” as the practical action to take in building credibility, and thus trust. In deciding whether or not a leader is credible, others first focus on the “say” – the leader’s words – then on the “do” – his or her actions, and then compare the two. If the say and the do differ, the leader is not credible. There must be a consistency between the two. Kouzes and Posner call this consistency the second rule of leadership: “Do what you say you are going to do.” Simple.

**There Seems to be a Pattern Here**

So what is the leadership takeaway from all of this?

◆ Know what you’re doing
◆ Know that you don’t know everything
◆ Be open about your beliefs and act in accordance with them, and, above all,
◆ Do what you say you will do at every step and turn along the way.

Then look forward to the highest compliment that can be given to a leader: “She’s a collaborative leader. And incredibly trustworthy.”

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A Leader Listens

Robert Holm, Butler University, and Tony Vertimiglia, Auburn University

Plans fail for lack of counsel, but with many advisers they succeed.

Proverbs 15.22

At some point in our careers, there has been a supervisor that truly heard what we said when we provided input or suggestions for improvement (in some cases, we WERE that supervisor). Unfortunately, this tends to be the exception rather than the rule. In order to be effective, a leader must know how to listen. While this sounds simple in theory, it often proves quite difficult in practice for leaders, depending on their individual personality traits and time commitments/constraints.

The following is provided as guidance for those willing to tackle the “listening” challenge.

A Leader Should Seek Input

Ask those with whom you work to share their thoughts and ideas about the direction you are setting for your staff, office, department, etc. People value the opportunity to offer input which often leads to their “buy in” for an idea. A leader must, however, be sincere in their request for input.

A Leader Must Want to Listen

If you are not interested in what others are saying, you will not adequately focus on what is being said. In this case, both curiosity and empathy are important factors in successful listening. For leaders who adhere to what Belasco and Stayer call the “head buffalo” leadership paradigm—that it is their job to plan, organize, command, coordinate and control—they may hear what is being said to them, but they are not truly listening. Even worse for a true leader is believing that he/she has all of the answers and does not need to seek, or listen to, input from his/her coworkers or staff. If you do not want to listen to input from others then do not ask for it. A word of caution for this approach, your staff will happily stand by the side of the road as they watch you walk off the cliff into the abyss of failure.

A Leader Must “Actively” Listen

When you are listening to an employee or coworker, are you automatically formulating a response while they are still talking? Even worse, are you preparing your list of “things to do” in your head, checking e-mail, looking at your watch, or answering your phone? If so, you are not actively listening. Active listening requires that you focus your attention on what is being said, not what your response will be. If someone has enough respect to bring their thoughts, concerns and ideas to you, it is your responsibility as a leader to actively listen to them. After they have finished

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speaking, you can work collaboratively to develop a solution or a plan to address their concern or input. This is very difficult for many people.

**Hearing vs. Listening**

The following summary from the Management Strategies Newsletter by Melissa Shaw, Network World, 09/09/031, is an excellent portrayal of what many of us do to those who are trying to have us listen to what they are saying. Try not to be the one who hears, but the one who empathetically listens.

“When it comes to the similarities between listening and hearing, the only one is you use your ears for both. After that, they’re very different. For instance, have you ever had an employee come in your office and you’re on the computer? You’re busy, you’ve got stuff to do, so while they stand there and talk to you, your body is facing the computer, your eyes are on the computer and an ear, or maybe two, is devoted to the poor soul on the other side of your desk. Aside from the abominable body language you’re displaying (‘What I’m doing on the computer is more important than you’) you’re probably not really listening to what the person’s telling you.

Next time you’re in a conversation with someone, or overhearing another, see how many times one party interrupts the other before he or she is finished speaking. Check yourself if you get the urge to jump in before the other person is through. We’re such a microwave, drive-thru, high-speed society these days; we’re rush-rush-rush, even when it comes to the art of conversation.

To improve your responsive listening skills, management expert Don Andersson suggests you recap what the person says after he or she is through speaking to ensure you got it right, a la, “Here’s what I’ve heard you say, tell me what I may have heard inaccurately.” “Most people will be really open to that,” he says. “Most want to know you’ve really listened, whether you’ve agreed or not.”

Then there’s the skill of listening for what’s not said. If you think a person is holding back or is not stating everything he or she wants, respond with a simple “Like...” “Because...” or “And...” “Frequently I can use a word like ‘because’ and shut up and listen to them.” Andersson says.”

**Reference**


**About the Authors**

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Leadership As Art
Beth Kroger, JILA

“Leadership is difficult and important, and a fundamental subject” (De Pree, 1987, p. ix). You have influence as a leader, regardless of your job title and regardless of the thought or lack thereof that you give to your own leadership. Surely, this influence could be strengthened and utilized more fully if some deliberation and intentional awareness were given to your own personal leadership. You have a choice: Shall your leadership be an absent-minded doodle in the margin of a page or will it be a carefully crafted work of art specifically and deliberately created?

This article will first review some basic leadership theory and then finish with ways in which leadership can mirror the artistic process. The information below is derived from several different books combined with my own personal experience and leadership training and the leadership curriculum I developed with a colleague for a college honors course.

Before we delve into leadership theory, I’d like to plug one of my favorite leadership books. Leadership is an Art by Max De Pree (1987) has been foundational to my personal and organizational leadership philosophy for many years. It is a relatively easy read and combines story telling with theory in an engaging way. If you read only one leadership book, this is the one I recommend. I lend this book to new supervisors and re-read the book myself every few years. It is a book that can seem deceptively simply on the surface but has many layers.

According to De Pree there are three essential themes which recur throughout the topic of artful leadership: integrity, building and nurturing relationships, and the crucial nature of community building.

This article will primarily focus on the two latter themes; but briefly, and to ensure we’re all on the same page, I’ll clarify what I mean when using the word integrity, which is the first recurring theme of leadership. Integrity is consistency in actions, words and beliefs. Integrity is achieved when what you believe comes through in what you do and what you say. Said another way, integrity is being true to yourself. Without integrity you cannot build and nurture relationships or build a community. Integrity is foundational to leadership.

The second recurring leadership theme is building and nurturing relationships. To clarify, these relationships are with people; the key word is people. Below is a brief excerpt from the book Leadership is an Art to help illustrate the importance of nurturing relationships:

My father is ninety-six years old. He is the founder of Herman Miller, and much of the value system and impounded energy of the company, a legacy still drawn on today, is a part of his contribution. In the furniture industry of the 1920s the machines of most factories were not run by electric motors, but by pulleys from a central drive shaft. The central drive shaft was run by the steam engine. The steam engine got its steam from the boiler. The boiler, in our case, got its
fuel from the sawdust and other waste coming out of the machine room—a beautiful cycle.

The millwright was the person who oversaw that cycle and on whom the entire activity of the operation depended. He was a key person. One day the millwright died.

My father, being a young manager at the time, did not particularly know what he should do when a key person died, but thought he ought to go visit the family. He went to the house and was invited to join the family in the living room. There was some awkward conversation—the kind with which many of us are familiar.

The widow asked my father if it would be all right if she read aloud some poetry. Naturally, he agreed. She went into another room, came back with a bound book, and for many minutes read selected pieces of beautiful poetry. When she finished, my father commented on how beautiful the poetry was and asked who wrote it. She replied that her husband, the millwright, was the poet.

It is now nearly sixty years since the millwright died, and my father and many of us at Herman Miller continue to wonder: Was he a poet who did millwright’s work, or was he a millwright who wrote poetry? (De Pree, 1987, p. 7)

I challenge you to consider the people with whom you work. Are they grant accountants, contract administrators or are they also someone else; maybe primarily someone else? How can you as a leader build and nurture a relationship if you don’t know the person? How can you as a leader build up meaningful professional development programs if you’re only looking one-dimensionally at job titles rather than people?

Think about building relationships with people in another way. Getting to know a person also enables the leader to discern the multiple gifts and talents that people bring to the department or organization. People are so much more than a skill set! The diversity present in your workplace, the different paradigms and experiences and talents, comprise a valuable resource just waiting to be tapped into on behalf of the organization. Building relationships is key to tapping into those hidden resources.

Consider a geode or an oyster. You might never guess, by looking solely at the exterior, that there is a beautiful treasure just waiting to be discovered inside. An important part of leadership lies in seeing the potential and the gifts that people bring. This recognition requires developing and nurturing relationships. Further, the best leaders not only see potential but also intentionally develop, liberate and utilize all of the talents and abilities that people bring to the organization.

When you consider the role of leadership often there is a strong component of procuring resources, saving resources and utilizing resources effectively. Clearly unnoticed and underutilized talent and unused abilities of the organization’s employees is a waste of the resources available to an organization.

De Pree goes on to say that “…in addition to all of the ratios and goals and
parameters and bottom lines, it is fundamental that leaders endorse a concept of persons. This begins with an understanding of the diversity of people’s gifts and talents and skills.

Understanding and accepting diversity enables us to see that each of us is needed and enables us to begin to think about being abandoned to the strengths of others of admitting that we cannot know or do everything.

The simple act of recognizing diversity in corporate life helps us to connect the great variety of gifts that people bring to the work and service to the organization. Diversity allows each of us to contribute in a special way, to make our special gift a part of the corporate effort.” (De Pree, 1987, p. 9)

You may have read or heard about *Good to Great* by Jim Collins. This book explains Collins’ research comparing companies that were deemed good to those that were considered great. Collins and his team identified eleven pairs of good companies. These pairs were in the same industry, about the same size, and were in similar financial and industry positions. Then during the same time frame of fifteen years, one of the paired companies just took off while the other didn’t. Those companies who dramatically outperformed their peers took a leap going from being a “good” company to being “great.” The researchers then analyzed each company in great detail trying to find the consistent differences between the good and great companies. One of the “Good-to-Great” findings is the great company’s approach to staffing and setting the company vision:

When they began the research project, the researchers expected to find that the first step in taking a company from good to great would be to set a new direction, a new vision and strategy for the company, and then to get people committed and aligned behind that new direction. They found something quite the opposite. The executives who ignited the transformations from good to great did not first figure out where to drive the bus and then get people to take it there. No, they first got the right people on the bus (and the wrong people off the bus) and then figured out where to drive it.

Now you might be thinking, “That’s just good management—the idea of getting the right people around you. What’s new about that?” You’re right; it is just plain old-fashioned good management. But what stands out with such distinction in the good-to-great companies are two key points that made them quite different.

The main point is to FIRST get the right people on the bus (and the wrong people off the bus) BEFORE you figure out where to drive it.

The second key point is the degree of sheer rigor needed in people decisions in order to take a company from good to great.

What advantages are gained from this rigor in people decisions?

1. If you begin with who rather than what, you can more easily adapt to a changing world.
2. If you have the right people on the bus, the problem of how to motivate
and manage people largely goes away.

3. If you have the wrong people, it doesn’t matter whether you discover the right direction; you still won’t have a great company. Great vision without great people is irrelevant. Not ruthless but rigorous.

Rigor is needed to create an environment or culture where the right people thrive. Think about it….the only way to deliver to the people who are achieving is to not burden them with the people who are not achieving. To be rigorous means consistently applying exacting standards at all times and at all levels, especially in upper management.

Being rigorous does not mandate ruthlessness. Remember it’s all about the people. By instilling rigor into getting the right people on the bus and in the right seats; you’ll also be creating an environment or culture where the wrong people either jump or get thrown off the bus. (Collins, 2001, pg. 41)

Throwing someone off the bus may sound ruthless but in reality a leader’s rigor in making people decisions not only helps the right people thrive but also helps those wrong people go to another opportunity where they may be the right people; where their gifts can be better utilized or where the company culture is more in-line with their own values. Not to say it’s easy—but in the long run it not only benefits you, and your team, but also the person moving off the bus. Building relationships not only helps a leader to understand the resources and gifts people bring but also helps a leader to more fully utilize people by understanding the appropriateness of their bus and/or seat assignments! For example, I’ve personally counseled accountants into nursing and customer service people into less people-oriented positions and I’ve provided positive references for really good people who were just in the wrong job or department. It’s a great feeling to help another person along to where their gifts will be used and valued.

A final thought: I encourage you to think about whether you personally are on the right bus and in the right seat. If not, what are you waiting for? Time to change buses!

Let’s move now to the third recurring leadership theme: the crucial nature of community building. Not only do an organization’s employees shape the environment or company culture, but the reverse is also true. The community and culture of a workplace also shape the individual.

“With the aid of culture we learn how to create ourselves” (Eisner, 2001, pg. 2). What is culture? In his book, The Arts and Creation of Mind, Elliot Eisner refers to two definitions of culture. The first is anthropological: a shared way of life. The second is biological: a medium for growing things. Eisner goes on to say that a workplace functions in both definitions of the word culture, making possible a shared way of life and a sense of belonging and community, and also as a medium for growing things (in our case people). How a workplace or other community is organized, the norms and the relationships they foster, all shape experiences that are central to growth. (Eisner, 2001, pg. 3)

Currently, I lead a research institute called JILA (which originally stood for Joint
Institute of Laboratory Astrophysics and is now just JILA). JILA is a partnership formed in 1962 between the University of Colorado at Boulder and the National Institute of Science and Technology (part of the United States Commerce Department). Three JILA scientists have been awarded the Nobel Prize in Physics, and JILA is a leader in recruiting and retaining women physicists. Additionally, both JILA scientists and JILA staff consider themselves to part of the same team, each person providing necessary expertise and effort as well as creativity and innovation as contributions to the shared success of the Institute. One of my leadership responsibilities is to ensure that our culture or community is conducive to the cross-pollination of ideas amongst great minds and is supportive of individual contributions and gifts. JILA requires a culture of creativity, interaction, high energy and fun to allow our scientists to shine. Keep in mind, this means fostering interaction within a community of introverts! So, we do a lot of things to bring our people (JILAns) together. We celebrate important holidays such as National Tug Of War Day, National Sugar Cookie Day, National Bad Poetry Day and of course National Frog Jumping Day. We make our own days like Decadent Desserts Day or Crazy T-shirt Day. We get together on Tuesday and Thursday afternoons for cookie time. On the outside it may just look goofy—but it is goofiness with a purpose and a very specific plan. Our fun is intentional rather than accidental. Our culture is specifically designed for JILA. What works well in one culture may not necessarily be successful in another. A leader needs to be keenly cognizant of their particular community and work to shape that culture effectively in a way that allows that community and those people to shine.

There’s a book I read a few years ago called *Work Like Your Dog* by Matt Weinstein and Luke Barber. The basic premise of the book is the importance of putting enjoyment and fun back into work. The authors discuss how a dog goes about their work, say catching a Frisbee. There’s a certain amount of joy and enthusiasm involved. I’d like you to consider for a minute how a dog acts when he catches the Frisbee. How do you act when you hit a home run at work, finish a project, make a presentation, catch an error or fix something? Likely your reaction is similar to the dog’s: pride, enjoyment, a sense of accomplishment and an eagerness to get back in the game. Now think of a different scenario. How does a dog act when he misses the Frisbee? Does a dog tell himself he messed up? Or does he wait with anticipation for the next Frisbee. How do you act when you make an error at work? I’m not saying that you should ignore errors. But rather than spending time and energy berating yourself, move on! Adjust your approach! Get back in the game! I’m saying that you should focus on what you’re doing well, on enjoying your work and the challenges it presents, and on anticipating the next problem rather than on criticizing yourself. If you enjoy your work, you’ll perform better and so will your co-workers and team. Fun is an important part of work. I believe that fun often is the difference between a high-energy, productive and successful team and a mediocre team. What are you doing specifically and intentionally to add enjoyment to your own work life and to that of those around you?

Ronald A. Heifetz, in *Leadership Without Easy Answers*, suggests that the leader’s work is to foster a community that allows for not only personal growth but also for
successfully grappling with the issues. Heifetz goes on to describe the most productive community as a “holding environment” that promotes learning and growth for both the individuals and for the department or organization. This holding environment allows for focus on issues and challenges while stimulating personal and professional growth, what Heifetz calls “adaptive work.” He advances the theory that adaptive work increases both the personal and organizational capacity for problem solving and for dealing with current and future realities. According to Heifetz, there are five steps in creating a holding environment:

1. Identify the adaptive challenge (or diagnose the situation) in light of the values at stake, and unbundle the issues that come with it. Early on in my career, I got some great advice from a mentor that I still use all the time: If you’re dealing with an issue and the reactions of one or more of the people involved seems disproportionate to the identified issue that you’re dealing with; then you have not yet fully identified the problem (or unbundled the issues that come with it). You can’t get where you all need to be until you diagnose the situation AND unbundle the issues. There could be pride or political capital or insecurity or something personal that follows you into the workplace. Think about other’s issues AND your own.

2. Keep the level of distress within a tolerable range for doing adaptive work. For example, think of a pressure cooker. You want to keep the heat up without blowing up the vessel.

3. Focus attention on ripening issues. Identify which issues can currently engage attention, and while directing attention to them, counteract work-avoidance and stress-reducing mechanisms such as denial, scapegoating, externalizing the enemy, pretending the problem is technical, or attacking individuals rather than issues. In a previous position I held, there were some major financial issues in the institution. A consultant was hired to come in and tell us the “truth” of our situation from an objective perspective. Good strategy, perhaps, but what ended up happening is that once the report was received; focus turned to assigning blame to individuals and arguing with the report rather than on solving the actual problem. This behavior completely distracted the community by giving them scapegoats and data to dispute, allowing them to avoid grappling with the real truth, that financial survival of the institution was not assured.

4. Give the work back to people, but at a rate they can stand. Place and develop responsibility by putting the pressure on the people with the problem and the power to address it. Most people rise to the challenge! Especially if they are in a community that values the truth and promotes growth and personal responsibility and accountability. It is counterproductive to put pressure on people to solve a problem and to withhold the necessary support and resources from them.

5. Finally and importantly, protect voices of leadership in positions without authority. Give cover and validation to those who raise hard questions and generate distress. These are the people who point to the internal contradictions of the community. These individuals often will have latitude to provoke rethinking that
authorities do not have. (Heifetz, 2002, pg. 128)

So let’s have a quick review, the three interlocked themes in leadership of integrity, relationships and community focus on, and are centered on, people, and each theme impacts the other.

Great. So how is that art? If you recall, the title of this article is “Leadership as Art.” To answer I refer to the book The Arts and the Creation of Mind by Elliot W. Eisner.

In his book, the author explains how an artist’s work enables us to experience our environment or culture, and to learn within it and through it: “Work in the arts is not only a way of creating performances and products; it is a way of creating our lives by expanding our consciousness, shaping our dispositions, satisfying our quest for meaning, establishing contact with others, and sharing a culture. (pg. 3)

It seems to me that leadership is not only a way to direct the creation of goods or services; it is also a way of creating an environment or community in which people can utilize their gifts, satisfy their need to belong and to give and to connect with others; accomplishing goals moving towards a shared purpose.

I encourage you to think for a moment about the artistic process and how it is similar to leadership. The artist has her materials (a leader has her team or co-workers). There is a vision by the artist/leader and they begin. During the process of creating art and:

in the process of working with the material, the work itself secures its own voice and helps set the direction. The maker is guided and, in fact, at times surrenders to the demands of the emerging forms. Opportunities in the process of working are encountered that were not envisioned when the work began, but that speak so eloquently about the promise of emerging possibilities that new options are pursued. Put succinctly, surprise, a fundamental reward of all creative work, is bestowed by the work on its maker...surprise is itself a source of satisfaction...it is from surprise that we are most likely to learn something. What is learned can then become a part of the individual’s repertoire, and once it is a part of the repertoire, new and more complex problems can be generated and successfully addressed. (Eisner, 2002, pg. 7)

Think again of the millwright who was a poet, and the surprise of that realization. This surprise and discovery set forth another paradigm to consider in leadership. Think about a project you’ve led or been a part of. Often there is an “Ah Ha!” moment or a turn that makes all the difference. Think about your work community and relationships. Do they shape you as you shape them? Perhaps in unexpected ways!

“If your camera is loaded with black-and-white film, you look for shadows, for light and dark, but if the same camera is loaded with color film, you seek color. What the film in your camera can do influences what you will do. If the only tool you have is a yardstick, you look for what you can measure.” (Eisner, 2002, pg. 8) Returning to De Pree’s bus analogy, consider the people in your bus, how they
impact the work you do and how they impact your working community. Then consider how do you impact them?

So too, like the artist and material, do the leader and their people influence each other, and help define, shape and transform their work, relationships and community. The element of surprise and discovery are present all around us in our workplace. The creation of a culture or holding environment in which people are free to think and grow and learn from each other, develops and realizes the best in each of us.

The center of the three recurring themes in leadership, integrity, building and nurturing relationships and crucial nature of community building is people. The three themes also are intertwined and are interactive and reactive with each other. Just as the artist and her work interact with each other in the creation of art, true artistry is also present in the leadership of people and a community with integrity aligning belief and action.

References


About the Author

Beth Kroger is the Chief of Operations at JILA, a research institute formed through partnership between the University of Colorado Boulder and the National Institute for Science and Technology (NIST) which is part of the United States Commerce Department. Previously, Beth served as an administrative and financial vice president in several small colleges over the sixteen years prior to her current position. Beth has an MBA and has attended a variety of leadership training including the Harvard Institute for Educational Management as well as co-teaching an honors leadership course. Beth enjoys biking, reading and spending time in the Rockies with her husband and their Wheaten Terrier, Bo.
Lealie M. Perry, Johns Hopkins University

Slow down...wait a minute...breathe!

In today’s fast paced world of e-mail, text and voice mail messages, it is a challenge to fine-tune our interpersonal skills. Do you remember the last time your boss stopped by your office just to say hello? When was the last time you asked a colleague, “How are you today?” and stopped to listen and hear their response? As you read this article, evaluate yourself and objectively assess if you are emotionally intelligent. R U EI?

As a student of NCURA’s Leadership Development Institute, I learned about emotional intelligence and its components. We discussed Daniel Goleman, who first brought the concept to the world’s attention in his book entitled Emotional Intelligence. According to Goleman, emotional intelligence is the kind of intelligence or skill that involves the ability to perceive, assess, and positively influence one’s own and other people’s emotions. [See the table for Goleman’s five components of emotional intelligence.]

During our studies, we also discussed and learned the attributes that a good leader must possess. Some might say a good leader is a person with superior communication skills; others may say that a good leader is an individual who has great management style and can make people do their job. What would you say? Does a great orator make a great leader? Does a good manager necessarily develop into a great leader?

To help us answer these questions, I wish to turn to literature – specifically, Shakespearean literature. At some point in our past academic years, we have been forced to read, dare I say it, Shakespeare! You probably remember being told to read Romeo and Juliet or Hamlet by your Literature instructor. In the true form of Shakespeare, especially the comedies, the scenes are elaborately displayed. The language is strong and at times vulgar, but Shakespeare is timeless. Shakespeare colorfully exhibits different levels of emotional intelligence and leadership abilities in all his characters.

We need only examine one of Shakespeare’s characters to determine her leadership abilities and level of emotional intelligence, beginning with Katherine Minola from Taming of the Shrew. In this play, there are five main characters: Petruchio, Lucentio, Baptist Minola, and his two daughters, Katherine and Bianca. Though each of these characters displays some form of, and growth in, emotional intelligence, for purposes of this article, I will focus on Katherine and show how her character grows and more fully develops her emotional intelligence and thus reaches full leadership potential.

Taming of the Shrew plays itself out as Petruchio desires to ‘tame the shrew,’ who is known as Katherine. Katherine is the oldest daughter of Baptist Minola, a

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wealthy, gentle, unassuming man. Katherine is a strong willed, independent, incorrigible, outspoken, and unruly young woman. During the sixteenth century, such women were referred to as shrews. She challenges, in the most outrageous ways, all that is expected of women of that time period.

**Figure 4120.10-1. Five Components to Emotional Intelligence According to Daniel Goleman**

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<thead>
<tr>
<th>Component</th>
<th>What Does It Mean?</th>
<th>What Are the Signs?</th>
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<tbody>
<tr>
<td>Self-Awareness</td>
<td>The ability to recognize and understand how you feel, your moods, your emotions, and drives and their effect on others</td>
<td>• self confidence</td>
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<td></td>
<td></td>
<td>• realistic self-assurance</td>
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<td></td>
<td></td>
<td>• self-deprecating sense of humor</td>
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<tr>
<td>Self-Regulation</td>
<td>The ability to manage your emotions and impulses; The ability to ‘reframe’ stressful situations into ones that are challenging</td>
<td>• integrity</td>
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<tr>
<td></td>
<td></td>
<td>• comfort with ambiguity</td>
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<tr>
<td></td>
<td></td>
<td>• trustworthiness</td>
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<tr>
<td>Motivation</td>
<td>Having a passion for your work, regardless of the status or pay scale</td>
<td>• strong desire to achieve</td>
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<td></td>
<td></td>
<td>• organization commitment</td>
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<tr>
<td></td>
<td></td>
<td>• optimism, even in adverse situations</td>
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<tr>
<td>Empathy</td>
<td>Understanding the emotional make-up of others</td>
<td>• cross-cultural sensitivity</td>
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<tr>
<td></td>
<td></td>
<td>• expertise in building and sustaining relationships</td>
</tr>
<tr>
<td>Social Skill</td>
<td>Ability to find common ground and build a rapport</td>
<td>• persuasiveness</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• effectiveness in leading change</td>
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<td></td>
<td></td>
<td>• expertise in building and leading teams</td>
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As the play unfolds, we learn that Katherine is totally aware of her behavior. She believes she is justified in her temper tantrums and otherwise outrageous behavior. She has no self-management, self-regulation, empathy, or social skills. As Katherine is courted by and married to Petruchio, she quickly realizes that she can have it all if she plays by the game of the day. She observes every action by Petruchio, understands what he desires, and persuades him to believe that he is a leader. Even through her strategic behavior, she is able to motivate others. As Katherine matures, she becomes more self-aware and learns to manage her behavior and exhibit appropriate social skills. Through this maturity, she wins the love, respect, and support of her servants. By the end of the play, she has earned the respect of her women friends and the adoration of her father. In the very last scene of the play, Petruchio is swept away by her generous words and they proclaim their love and admiration for one another.

Petruchio arrives in Padua and he is very attracted to Katherine’s dowry. Petruchio is stubborn, unruly, and outrageous and seemingly has no respect for anyone, not even himself. He seems to amuse himself with his inappropriate behavior and comments. Though we believe him to be a leader, his effectiveness is a result of the fear he instills in others.

In the same way that Shakespeare often hides a play within a play, here he also hides the true leader deep within the play’s center of attention: Katherine. While each of the main characters has leadership traits, the real leader, the one who develops a high level of emotional intelligence, is Katherine.

Katherine, though considered a shrew, has learned that others, even her family members, succumb to her whims as a result of her outrageous behavior. Katherine is often found berating Bianca for her beauty and her inability to choose between
her many suitors. As the play progresses, we find Katherine often caught in her own silence. Is this reflective thinking, or a simple blank stare? Katherine matures over time and her unruly behavior begins to subside. We begin to see the rough edges of Katherine’s leadership ability become smoother. She spends time alone and learns to understand her true desires, becoming more self-aware and learning to regulate her behavior. She quickly learns that when she behaves and communicates with others in specific ways, she meets her goals and achieves her desires. This is an example of Katherine’s self-awareness and self-regulation being developed.

As a leader, Katherine’s greatest challenge is learning how to get Petruchio to provide all things to satisfy her needs and desires. Like a manager and employee relationship, she ‘courts’ his emotions (Katherine’s display of empathy) throughout the play and when he believes he has finally captured her, she provides a complimentary speech at the end of the play, which strokes his ego. She masterfully delivers this speech in front of Petruchio’s peers and other women.

Katherine is a strong and independent thinker. Her decisions are swift and she is able to carry them out. She challenges the process by not allowing herself to be forced in the mold for women of that time period. We also learn that Katherine has vision and is able to motivate persons to change their behavior in more positive ways.

In an unlikely way, we learn that even in Shakespeare’s comedy, Taming of the Shrew, leaders reveal themselves. We also learn that we all possess the ability to develop our emotional intelligence and enhance our leadership ability. Yes, even the strong-willed Katherine.

Under the proper set of circumstances, one can reach into one’s inner core and reflect, observe, and learn. Through this process, a leader learns objectively to assess the circumstances and develops a higher level of emotional intelligence. When compelled, the leader in all of us will rise to the occasion. Leadership is within us...but it may be dormant. These leadership skills can be developed through personal and professional experiences. Just as a baby is born, is nurtured, and grows, there are growth stages in every leader. We see this growth in Katherine from her infancy stage of being a shrew to her adult stage of mature emotional intelligence and leadership.

As you continue your leadership journey, take a moment to breathe. Stop by a colleague’s office just to say hello (and listen to their response) and to extend an honest compliment on the day’s work performance. And, as you continue your journey, periodically check yourself and ask, M I EI?

I wish to extend a humble thank you to Dr. Percy Thomas, NCURA, Gale Wood, and the entire LDI Class of 2007. Your inspiration, encouragement, and input have been invaluable, and without it, this article would not exist.

About the Author

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¶4120.11 What is Required to Produce Bold Thinking and Fresh Ideas?
Jeffrey Cufaude, President and CEO, Idea Architects

As more organizations focus on innovation, this is a question that every facilitator must be prepared to answer. We have to increase our understanding of the relationship between creativity and innovation, become more familiar with the discipline of design thinking and its applications, and build our capacity and competence to design and facilitate ideation and rapid prototyping sessions that help individuals and groups move through the creative, critical, and constructive thinking stages.

Here are seven fundamentals I have found critical to facilitating innovation:

1. Let’s remember Kurt Lewin’s adage that behavior is a function of people interacting with the environment. Your session needs to take place in an environment that is conducive to expansive thinking. You want a room with ample space, flexible configurations, windows, lots of whiteboards and walls for posting ideas, comfortable and varied furniture. In short, you want a space that you are unlikely to find in a typical hotel. Conference centers sometimes are better, but you may have more success choosing a non-traditional venue: an art gallery or museum, an ad agency’s meeting space, an open room in an artists’ warehouse, a grade school (hey, it’s where we last played with unbridled creativity).

2. The environment is important, but let’s not forget the other key ingredient in Lewin’s formula: the people. Research shows a correlation between a group’s diversity of perspectives and innovative results. Who can be included in the session that will expand the natural thinking and viewpoints present? Who are good thinkers outside the team being convened who should be included, both from other areas within the team’s organization, as well as individuals outside the organization itself? Who are wild cards ... the unusual suspects ... who could shake up the conversation if present?

3. As Steven Johnson notes in his book, Where Good Ideas Come From, “Good ideas often result from the collision between smaller hunches so that they form something bigger than themselves.” Your facilitation needs to more intentionally help participants make their hunches public so that they can collide with others’ thinking and perhaps lead to a bigger and better idea. This requires both creating the safe climate for people to share partially-formed thoughts, as well as using more visual facilitation tools and techniques to archive ideas expressed. Two tactical tips: (1) instead of you capturing others’ ideas, stock the room with sheets of paper, notecards, jumbo post-its, and a variety of pens and markers and ask participants to note their own ideas and post them appropriately; and (2) set a challenging goal for the # of ideas to be generated. Having a quantified target often enables participants to more freely share half-baked notions that they otherwise would have self-censored.

4. Even when you diversify the participants, further stimulate the thinking that will take place through the pre-work that participants complete. Share diverse pre-readings to broaden participants’ perspectives; on Twitter, have them follow
interesting individuals, scan Tweets related to particular hashtags, and/or participate in an appropriate Twitter chat; assign them a thought leader to interview and report on at the actual meeting; and expose them to data that may interrupt their biases or pre-conceived notions. As Johnson also noted in his book, “chance favors the connected mind.” Use pre-work to diversify and expand the connections the session participants will bring to the conversation.

5. Engage participants in field research. If we accept that innovation yields a new dimension of performance or value as Peter Drucker asserted, we must also accept that the enhanced value is in the eyes of the customer, member, or end user. Whenever possible, involve participants in actual pre-work that includes observation of the target audience in action to see what patterns of behavior they notice, frustrations that the end user works around, aspirations they may not be expressing. As Gary Hamel has noted, “innovation often results from insight into the unarticulated need.” Acting as anthropologists, participants can use observational research to help unearth those unarticulated needs.

6. Use provocations or disruptive hypotheses to stimulate fresh thinking. This approach engages participants in exploring lines of thought that seem unreasonable given present reality, but ones that often yield the ideas that dramatically escalate the value of a product, program, or service. Until someone asked, how could we make it possible for people to carry their entire music library with them (leading to the invention of the mp3 player), we were forced to select with dozen or so CDs we want to put into the music wallet to take with us on vacation.

7. Draw on a variety of techniques and activities to engage participants in different thinking. In the creative thinking stages of the innovation process, I find it beneficial to churn the group process more, to use more varied exercises and activities to remix and recombine participants and their thinking. Three of my favorite resources for doing so are IDEO’s method cards, the exercises in Dan Pink’s book A Whole New Mind (full disclosure, I authored some of them), and the Stanford d.school Boot Camp bootleg for methods and activities.

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About the Author

Jeffrey Cufaude is an architect of ideas. His areas of work include strategy think tanks that bring fresh eyes and thinking to critical questions; volunteer and staff development workshops and retreats; content design and facilitation of leadership conferences and learning experiences; and major keynote presentations. His past experience as executive director of two national associations and as a student affairs staff member at two large public universities informs much of his work today. He graduated cum laude with a BA in English and an MA in Communication Theory from Northern Illinois University. Jeffrey has helped train NCURA workshop faculty for several years, as well as been a presenter for the NCURA Executive Leadership Program.
Tools of Extraordinary Leaders
Kimberly Pace & David Furse, Owen Graduate School of Management, Vanderbilt University

Every great leader must be a great communicator. Clear, consistent, comprehensive communication represents the single most powerful tool for a transformational leader.

Randy Dobbs, former CEO, GE Corporation

Transformational Leadership
Transformational leadership is about communicating a compelling strategic vision. Leaders use vision to transform the culture and build esprit de corps. In this transformed culture everyone shares the vision and feels enthusiastic about being part of accomplishing it. Job #1 of the transformational leader is to transform the culture.

The transformational leader must not only communicate a compelling vision, but must also deliver results. Even if you improve the culture, the esprit de corps, and the communication, you have not transformed the organization until you transform the financial results. This is the simplest and clearest measure of a transformational leader.

Finally, the leader’s most lasting mark is that the transformation doesn’t stop when she or he leaves, but is self-sustaining through a cadre of transformational leaders, trained and mentored by the original leader.

Communications Down, Out, and Still Up
Authentic leaders are surrounded by team members, peers, employees, and administrators who desire to listen to them and help them execute the strategic vision. Great leaders are great communicators.

Before you were a leader in your organization, even if you managed others, you communicated up – up to top administrators of what you were doing to carry out the strategy of your division.

Now, you are the one in the leadership position. Things have changed. You spend more time communicating down to those who execute the work. Although, you still communicate out to your peers, and up to your stakeholders.

The Everything-Matters Rule
Imagine yourself as a professional basketball coach. You coach, train, and motivate your players during practice. Now, it’s game day. You don’t get to go on the court and play. In fact, the game is often moving so fast that your players are calling most of the plays. Because the circumstances change in an instant, your players must be ready to make smart decisions, quickly.

As the leader, you’re like the professional basketball coach. You are responsible for the vision and strategy. But your real job is to persuade, compel, and motivate your team to go out and get it done. If you have to tell them how, you probably have the wrong team.
As the leader, you are always onstage. Everything you do and don’t do, say and don’t say, will be noticed. Everyone is watching you. In the role of the leader, what you communicate and how you communicate it matters. There is no little or insignificant communication from you – everything matters.

**Personal Brand – Your Nike “Swoosh”**

As a leader, it’s important to not only think “like a CEO, but lead and act like a CEO.” As a leader, you have the foundational skills of listening and feedback. It’s time to review and hone your executive communication skills. In order to do this, consider creating your own personal brand – your own Nike “swoosh” that influences, motivates, and persuades others. Your “swoosh” represents your personal brand – what makes you unique, what you promise always to do, and what you can do consistently.

To understand personal brand, think about a product or service. You think “safety” when you hear Volvo, or “Guaranteed On-time Delivery” with FedEx, or “Just Do It” with Nike. Just like products and services, you have a brand. Your brand is how other people perceive you, but you define your own leadership brand. As a mid-level administrator you had a brand that was defined by your job, your team, and the executives above you. Then, when you moved into the leadership role, you are in control of your own brand.

**Perception is Reality, So Manage It**

To create your brand, an extraordinary leader must first manage perceptions. It is true that what others think about you is their reality. Your employees will base their perceptions of you based on their past experience working with you. If this has been great, you are off to a strong start. If not, you’ll need to manage their future expectations. Your leadership is a product. What are the key benefits that you bring to the table? What unique benefits do you offer that no other leader can? You must be exceptionally clear about your own values and what drives your decision making process. For employees to trust you, they must know this clearly.

Go sit in a Starbucks coffee shop, watch, and talk to the customers. Some walked blocks for their cup of coffee. Many come, set up their laptops, and stay for hours. Most are paying over $3.00 for their coffee. The line is long. Even when they mess up the coffee order, customers rarely get angry. Around the “water cooler” at work, you’ll hear people recommend a new coffee drink or a new CD.

Even with new competition in the gourmet coffee industry, Starbucks has the kind of brand that would be helpful for you to adopt as a leader. You want people to be willing to travel to meet with you, stay as long as needed, pay you what your time is worth, wait longer for a deadline if needed, forgive you quickly if you make a mistake, and recommend you to others.

**Be In Tune with Your Touchpoints**

Your personal brand is communicated every time someone comes in contact with you or any information about you. These occasions are called touchpoints – and they
happen before someone even meets you, while they are with you, and after they leave. If you Googled yourself, what would you find? How do others describe you when someone asks what you are like? While they are with you, are you prepared for the meeting, approachable or distant, focused or distracted? After they leave, do you follow through on what you promised to do in a timely manner? Managing all your touchpoints is the hidden secret of great leaders.

How you work with a colleague, employee, client, customer, and even your own family defines your personal brand. It’s also something that you do consistently and over-time. It’s not a one-time “going on stage,” but what you do on a daily basis, especially in stressful situations that defines you.

**Know Your Leadership Style**

To manage your touchpoints and brand, it is important to understand how others perceive you. One way to gain a reality check is to engage others in a discussion about your leadership style.

To be a transformational leader, it is important to understand your preferred leadership style and also develop additional leadership styles to use depending on the situation.

Daniel Goleman completed a three-year study with over 3,000 managers published in *Harvard Business Review* as “Leadership That Gets Results.” In this article Goleman’s discusses six leadership styles. Are you better at:

- mobilizing others to a vision (authoritative),
- creating emotional bonds (affiliative),
- modeling excellence (pacesetting),
- developing people (coaches),
- demanding compliance (coercive), or
- building consensus (democratic)?

Pick out which type of leader is most consistent with your leadership style. Then, consider how to improve and when to use all of these leadership styles. To be an extraordinary leader, you need all six of these styles in your tool kit.

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Exploring Emotional Intelligence for Better Leadership

Michelle Vazin, Vanderbilt University; Helena Moynahan, University of Maryland College Park; and Robyn Remotigue, Mississippi State University

As research administrators we function in a fast pace work environment with emails, instant messaging, texting, and voice mails. It is so easy to get caught up in the world of electronics, that it becomes a challenge to work on our interpersonal skills. For example, when was the last time you thought about your own interpersonal skills? How long has it been since you stopped by one of your colleague’s office just to say “hello” or ask “how are you doing?” In fact, I have wondered myself when someone asks “how you are doing?” do they really want to know and do they really want to take the time to listen – really listen?

As students of the Leadership Development Institute, we learned about Emotional Intelligence (EI). As a part of the LDI, we learned that leaders who possess (EI) are generally distinguished as those that are outstanding rather than just being adequate. These leaders have the technical and analytical skills that are required in a leader, but they also possess the personal qualities of a humanistic approach. Emotional Intelligence has to do with knowing when and how to express emotion as well as how to control it.

Daniel Goleman was the first to bring the term “Emotional Intelligence” to the world’s attention in 1995 when he titled his book the same name. Goleman found that traditional qualities such as toughness, determination and vision are required for success. However, alone they may be insufficient to be a truly great leader. Leaders that are most effective distinguish themselves from the rest because they possess a high level of (EI). In this article we will describe the various components of (EI) and we will share ideas and tips on how to boost your (EI) to strengthen your leadership abilities.

Defining EI

So if the really effective leaders in society possess a high degree of Emotional Intelligence, what are the skills or attributes we are talking about? Daniel Goleman does a great job of describing what the skills are in his article for the Harvard Business Review, entitled “What Makes a Leader?” and his book, “Emotional Intelligence”. Goleman lays out what the five components of Emotional Intelligence are at work. First, one must have a sense of Self-Awareness. This is demonstrating the ability to recognize and understand your own moods and emotions and what is important to you as well as how they affect those around you. People with this trait tend to be self-confident and realistic about their capabilities and limitations. Second, there must be a degree of Self-Regulation. Basically this is “thinking before you leap”. A person with self-regulation has the ability to effectively control their impulses or moods. When this trait is present, people tend to be seen as trustworthy and hon-

1 This article is reprinted from the NCURA Magazine, September/October 2011, Volume XLIII, No. 5. It is used with permission of the publisher.
People who are motivated, love what they do for the sheer joy of it and as a result, they tend to bring a lot of energy and drive to the table. Adjectives that could be used to describe someone with motivation would be optimistic, driven to achieve, and committed. The fourth attribute of EI is Empathy. When one possesses empathy, they have the ability to understand the emotional makeup of those around them. They tend to be successful in building and retaining talent in an organization and satisfy their clients and customers needs effectively. The fifth component that Goleman attributes to Emotional Intelligence really ties the first four together. It is Social Skill. When people’s social skills are healthy and present, they exhibit a proficiency in managing relationships and building networks within an organization. Building a rapport and finding common ground amongst groups comes easily. They are very persuasive and excel at leading change.

It seems clear that Emotional Intelligence is very much focused on the “people-side” of things. That is, the more accepted qualities of leadership such as intellect, determination, strength, vision etc. are definitely important traits in successful leaders. However, when these traditional qualities are partnered with the traits described above that are associated with Emotional Intelligence; the leaders’ success rate rises dramatically. Being able to understand and connect effectively with the people being managed and led is critical. The human aspect of an organization is the heart of its success and the leader that acknowledges that fact, understands that fact and can tap into that vital resource as a result of a high Emotional Intelligence factor will succeed with outstanding results.

Tips to Boost EI to help prevent the “amygdala hijack”:

You feel like you are a good leader, but you know there is always room for improvement. Tapping into the EI components described above may be the secret for you. Where should you start? What are the things to be considered? Let’s start by introducing one more concept that Goleman developed – an “amygdala hijack”. An amygdala hijack was a term coined by Goleman. The amygdala is in the center of the brain, the “emotional brain”. It controls the proper emotional reaction to triggers. When the amygdala erupts from an overheated limbic system, it has been hijacked. So the opposite of an amygdala hijack is emotional intelligence. If we agree that having a high degree of EI enables one to become a better leader, then preventing “amygdala hijacks” would be beneficial.

Try these worthy strategies for boosting your EI components and preventing the amygdala hijack effect. These might offer you some tips which will help you improve you leadership skills and ensure that you don’t “lose it” in work settings which can be awkward and unproductive.

Self-Awareness - Know who and what pushes your buttons. Keep a journal. Knowing how someone or something produces a negative reaction is critical in developing the ability to take control of the situation and maintaining your composure and calming yourself down. Seek feedback from others. This can be a real eye-opener. How do your emotions and reactions affect other people? Seek specific
examples and situations. How you are perceived is great feedback for working on those emotions and reactions that are impacting others negatively. Watch the ripple effect. Even those seemingly on the sidelines are impacted. Get to know yourself under stress. Most people recognize the warning signs. Take the time to recognize the signals and recharge your batteries.

**Self-Regulation** - This component builds upon self-awareness which is necessary for effective self-regulation. You need to be aware of your emotions in order to manage them. Take slow deep breaths...The next time you find yourself in a stressful or emotional situation, focus on taking in more oxygen. The short shallow breaths that most people take are enough to run the necessary basic functions of the body, but if you want to remain focused and calm, try deep breathing. Count to ten...this one our mothers reinforced when we were young. It works. Both the counting and the breathing will help relax you and keep you from making a rash decision or action long enough to regain your composure and perhaps gain a more rational perspective of the situation. If you’re in a meeting, bring a drink. You may not want to count to ten but taking a drink gives you the same amount of time to regroup and it’s subtle. How about sleeping on it? Time may help you to self-regulate. Time helps you gain control of emotions that might lead you down the wrong path. Wait for the dust to settle before you act. Try smiling and laughing more... Our brains respond to the nerves and muscles in our faces. Customer service is a huge portion of our jobs. Put on that ‘pudding face’ when you’re really not feeling up to it. It will help counteract that negative emotional state. Don’t let your bad mood paralyze your judgment. Be aware of your own self-talk. Negative self-talk is unrealistic and can be self-defeating. Stop beating yourself up over every mistake and you’ll stop making your problems and issues bigger than what they are. Make your self-talk factual not judgmental. This may take some practice.

**Motivation** - You need to like what you do in order to stay motivated. Be an optimist in adverse situations. Being around a negative person is deflating. Inspire service, effort and commitment by your own actions.

**Recognition** - take the time to acknowledge a job well done or that person who shows initiative. Make the extra time it takes to recognize your staff because the rewards are great. Know the strengths of your people and set goals that are attainable and well-defined. Make time for fun.

**Empathy** - Observing people will help in your ability to recognize and understand the emotions in others. Step into their shoes. Try to gauge what their reaction to a problem might be. Be curious about the other person. The more you know the better you are at meeting and understanding their needs. Don’t give mixed signals. If you are telling someone they did a good job on a project but your body language and voice are not projecting this in a positive way, the person will trust what they see over what they hear. Match your tone with body language. Be sincere.

**Social Skills** - Greeting people by name is a strategy to live by in all walks of your life. Everyone is important and addressing people by name is extremely important. Try not taking so many notes in a meeting. Focus on the people to recognize and understand how they are feeling and thinking. By focusing on note tak-
...ing, you might miss the clues that shed light on how others are feeling or what they are thinking. Don’t interrupt a conversation. Wait until the person is completely finished. You should be fully engaged in what the other person is saying. We’re in the discussion to learn not necessarily to make our own points. Practice listening. Hear the speed and volume of the voice. When you are on a phone call, don’t type an email. When someone enters your office, turn toward them and away from your computer. Use ‘please’ and ‘thank you’ more. Incorporate these into your relationships. Building trust is a big one. Consistency over time with our words, actions and behavior will build trust.

Hopefully, some of the points made in this article already resonate with you. There is definitely food for thought here in bringing more of the human connection back into our professional interactions. The concept that “people matter” can truly get lost in this age of technology. We can do almost everything remotely. Choose not to more often. Connect with the people around you. If you want to see ‘eye to eye’ then you might need to meet ‘face to face’. Build and maintain your relationships. Tap into your EI attributes and make a difference in your corner of the world. You may be surprised by how effective you can be as a leader once you attain a high degree of Emotional Intelligence.

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¶4120.14 Emotional Intelligence, Paper Tigers, and Pause Buttons
Robyn Remotigue, Mississippi State University, and Laura Letbetter, Kennesaw State University

Renowned lecturer and science journalist Daniel Goleman is widely credited for bringing the concept of emotional intelligence to the general public and to the business world. His 1995 book *Emotional Intelligence* remained on the New York Times bestseller list for a well over a year, and there are five million copies in print in numerous languages. His article “What Makes a Leader?” is highly recommended reading for leadership courses and seminars, including those organized by NCURA. In this definitive article, Goleman describes emotional intelligence as “the sine qua non of leadership” (p. 3), and he defines and describes each of its five components: self-awareness, self-regulation, motivation, empathy, and social skill (p. 2). Three members of the NCURA Leadership Development Institute class of 2010 provided an overview and their personal insights on the five components of emotional intelligence in the September/October issue of this magazine. In June of 2012, eight members of the NCURA Executive Leadership Program (ELP) Class of 2012 participated in an emotional intelligence workshop led by Susan Dunlap of Susan Dunlap & Associates. Dunlap directed the group’s attention to Peter Salovey and John D. Mayer’s definition: emotional intelligence is the ability to monitor one’s own and others’ feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions. How one can use this information about emotions in an important question for research administrators.

Research on emotional intelligence indicates that it can have a far greater impact on being a successful leader than IQ or technical skills. Research also indicates that emotional intelligence can differentiate between an average leader and an exceptional leader. According to Goleman, “If your emotional abilities aren’t in hand, if you don’t have self-awareness, if you are not able to manage your distressing emotions, if you can’t have empathy and have effective relationships, then no matter how smart you are, you are not going to get very far” (qtd. in Hughes, 2004). This statement should resonate with research administrators. We work in a charged environment. Ideally research is an objective endeavor, but in real life, it is riddled with emotion. Applications, proposals, and contracts can be risky ventures for principal investigators. Their careers and their sense of self-worth are often at stake. Our own careers and sense of self-worth are predicated not only on what we know and what we can do, but also on whether PIs, colleagues, supervisors, and sponsors believe we know what we are doing. Trust between PIs and research administrators is essential, and emotional intelligence is the key to building trust.

If it is intuitively obvious as well as supported by social science research that our technical abilities, cognitive skills, and competencies just aren’t enough, then what gets in the way of our exercising and developing our capacity for emotional

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intelligence? The answer to this question may lie in how human beings are wired. There are specific reasons why we sometimes react to stress as though we are not ourselves. Dunlap (2012) offered the ELP class several examples: a person whose normal state is to be a considerate, good natured team player may under stress become possessive, detached, stubborn, or insensitive. A person who is normally pioneering, assertive, and positive may become abrasive, arbitrary, controlling, and opinionated. A colleague who is normally considered to be knowledgeable, thorough, and diplomatic may transform into a perfectionist who is hard to please and defensive. The outgoing, persuasive, or inspiring individual may seem overly confident, a poor listener, or a self-promoter. Dunlap asked us to consider what could explain such extreme transformations. She then introduced the concept of *amygdala hijacking* and how it impacts us at work. The term comes from Goleman’s 1996 book, *Emotional Intelligence*. The amygdala is an almond-shaped mass of gray matter in the anterior portion of the temporal lobe of our brain. Its job is to process our emotional reactions and survival instincts. The neocortex, located on the outer surface of the cerebrum, is in charge of higher functions such as language and memory. In a 2011 interview, Goleman explained in lay terms how amygdala hijacking works:

The amygdala is the trigger point for the fight, flight, or freeze response. When these circuits perceive a threat, they flood the body with stress hormones that do several things to prepare us for an emergency. Blood shunts away from the organs to the limbs; that’s the fight or flee. But the response is also cognitive—and, in modern life this is what matters most, it makes some shifts in how the mind functions. Attention tends to fixate on the thing that is bothering us, that’s stressing us, that we’re worried about, that’s upsetting, frustrating, or angering us. That means that we don’t have as much attentional capacity left for whatever it is we’re supposed to be doing or want to be doing. In addition, our memory reshuffles its hierarchy so that what’s most relevant to the perceived threat is what comes to mind most easily—and what’s deemed irrelevant is harder to bring to mind. That, again, makes it more difficult to get things done than we might want. Plus, we tend to fall back on over-learned responses, which are responses learned early in life—which can lead us to do or say things that we regret later. It is important to understand that the impulses that come to us when we’re under stress—particularly if we get hijacked by it—are likely to lead us astray.

Dunlap asked us to consider how the amygdala is perfectly designed for activating our response to a saber toothed tiger, but far less helpful in the 21st century workplace! The amygdala hijack is common in every level of the research administration environment. You receive notification at the last minute that a proposal is due on a day you asked off weeks ago, and the PI is a college dean. Hello, amygdala! You spend hours developing a detailed five year budget that includes a team of 22 faculty, only to find that the lead PI has manually overwritten every formula in your spreadsheet. Can you feel your cortisol level rising? In response to deadline pressure, you submit a multidisciplinary proposal minus one dean’s signature, with the understanding you have approval to move forward, only to learn later that that dean has significant issues with the submitted proposal and is unwilling to sign off.
Now your amygdala is going off like a rocket! Venting to a colleague may provide some immediate relief, but the price is that you are spending precious time doing something other than working the problem.

The trick is to find a way to give your neocortex a chance to catch up. How many times have you wished your life had a pause button? Not only so you could enjoy the wonderful moments, but so that you could have that extra moment to think about how to respond in a high pressure situation? As research administrators, we need to be mindful of what triggers our emotions and identify strategies for redirecting ourselves from emotional reactions. It is important to remember that we do actually have pause buttons at our disposal; we just need to find them. Think about what sets you off emotionally. Is it when someone doubts your knowledge or interpretation of a program or policy? Is it a late breaking email insisting upon an unreasonably last minute proposal submission or contract deadline? Is it when a PI assumes you must be an unfeeling bureaucrat who doesn’t care about science? A perceived lack of disrespect for one’s time, experience, intelligence, or humanity is a big trigger in academia and in the research administration environment. Simply acknowledging what upsets you and what can help you find potential pause buttons. Dunlap suggests easy meditation by taking three deep breaths or a quick walk inside or outside your office. You may be on a tight deadline, but you will save time and improve relationships by taking a moment on the front end. One ELP member suggested the use of a mirror at your desk so you can keep watch of your facial expressions while taking a phone call! Learn to smile more at yourself in the mirror. Turn off your light for thirty seconds and then turn it back on again, visualizing the light as a reset button. Naming your emotions by keeping a journal is a time tested method. Another ELP member suggested writing words and thoughts about how you feel at the moment and then throwing them in the trash to symbolize your mastery over those feelings. Dunlap even suggested pinching your finger during times when you are triggered, a Reiki technique for increasing awareness and management of your emotions. Whatever technique you choose, the idea is to find a way to buy yourself enough time to allow the thinking brain to catch up, to recognize that there is no tiger. Then your next steps can be directed by your neocortex and not by your amygdala.

Finding the pause button is an act of leadership. When you redirect yourself from a potential amygdala hijacking, you are also defusing the situation for the person who initially triggered you. You will find yourself spending less time venting and more time doing what you do best, as will those around you. We are more valuable to our PIs, our colleagues, and our institutions when we are able to master our own emotions. Many of us would like to fine tune our self-awareness. Like learning to play the cello, speak another language, or interpret OMB circulars, it takes practice. Self-mastery is a lifetime journey, a process rather than an event. Knowing a paper tiger when you see one is a good starting point.

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¶4120.15 Is Your Glass Half-full or Half-empty? Creating a Framework of Optimism

Ann Smith, Michigan State University, and Maria E. Valero-Martinez, University of Miami

It seems quite easy to encounter stressful changes and events these days. Whether facing challenges with ARRA reporting, bleak economic news, compliance audits, lay-offs or other disappointing circumstances, do you permit your mindset to hold that the “glass is half empty” or are you a person who could be called an eternal optimist? An optimist is widely thought of as someone who sees the positive aspect in every cloud and views the world through rose-tinted spectacles (or a glass that is always half full). Great leaders believe that treating every day with the “glass is half full” attitude is one of the keys to successfully dealing with stress and living a more satisfying and healthy life.

Individuals have different styles for how they define a positive or negative event. An individual’s optimism is measured by one’s “explanatory style” or how one chooses to view a positive event. An event can be categorized as internal or external, stable or unstable, isolated or global. Characterization of an event as internal or external means the event is a result of something an individual did (internal) or something out of their control (external). Stable or unstable refers to whether the positive event will re-occur (stable). Global events are viewed as having an effect on other areas of an individual’s life, whereas isolated events are viewed to have little or no impact on the future.

An optimist will often define a positive event by: (a) something they did (internal), (b) a sign of more good things in the future (stable), and (c) evidence that other areas of their life will be positively affected (global). Negative events are viewed as: (a) not their fault; and (b) an isolated occurrence that will not affect future events or areas of their life. For example, an optimist who is promoted is likely to believe the promotion is because she/he is good at her/his job and will receive more benefits and promotion in the future. If she or he is passed over for the promotion, it will likely be attributed to having an off-month or extenuating circumstances, but that she or he will do better in the future.

Pessimists tend to think the same way about negative events. They typically believe that they are responsible for negative events (internal) and that one negative event will trigger more in the future (global), because they personally are the cause. They typically see positive events as an isolated incident (local) caused by things outside their control (external) and that probably will not happen again (unstable). Not only will pessimists view a promotion as a lucky event that is unlikely to happen again, they may even worry that they will now be under more scrutiny. Being passed over for promotion would probably be explained as not being skilled enough. The pessimist would, therefore, expect to be passed over again for future promotions.

1 This article is reprinted from the NCURA Magazine, January/February 2010, Volume XLII, No. 1. It is used with permission of the publisher.
Researchers like Martin Seligman, Director of the University of Pennsylvania’s Positive Psychology Center, have been studying optimists and pessimists for years, including the effects of optimism on a person’s general level of happiness. They have found that an optimistic worldview carries certain advantages. Optimists typically see hardships as “learning experiences” and often, even the worst day holds the promise that “tomorrow will probably be better.” Optimists often see the brighter side of things and believe that they experience more positive than negative events and that the good events will enhance everything they do.

Optimists also tend to experience less stress than pessimists do. Because optimists believe in themselves and their abilities, they expect good things to happen. Negative events are seen as minor setbacks that can be easily overcome. They do not feel overwhelmed when things do not go as planned. In fact, optimists believe that things happen for the best and another opportunity will present itself because they are in control of the future. Positive events are seen by optimists as further evidence of good things to come. Because optimists believe in themselves, they are more likely to take risks and therefore create more positive events in their lives. In a longitudinal study of ninety-nine Harvard University students, those who were optimists at age 25 were significantly healthier at ages 45 and 60 than those who were pessimists. Other studies have linked a pessimistic explanatory style with higher rates of infectious disease, poor health, and earlier mortality. Highly pessimistic individuals have a higher risk of suffering from cardiovascular disease and other ailments. Do these studies prove that having a positive attitude can add years to your life? Maybe not, but having an optimistic outlook on life may bring with it less stress, increased self-esteem and greater health benefits.

Optimism also undoubtedly has a remarkable effect on helping teams to stay healthy, efficient and productive. Seligman also analyzed the explanatory styles of sports teams and found that optimistic teams performed better than the pessimistic ones. Optimistic teams also had better synergy. Optimism can be contagious and can have a positive effect on office staff during difficult times. Office morale can improve and individuals can have a better outlook about themselves and their institutions. With an optimistic attitude, teams can accomplish tasks that might otherwise seem insurmountable to their pessimistic counterparts. Increases in overall performance and productivity may also be seen when the staff have optimistic attitudes. Optimists do not give up under challenging situations and they are more likely to achieve success because of their persistence.

As leaders, it is important to lead with optimism and a positive attitude. Our attitude and actions affect, in one way or another, the people around us. This happens not only verbally, but also instinctively and on a subconscious level, through thoughts and body language. Negative thoughts, words and attitude bring up negative and unhappy moods and responses from others.

By choosing to be an optimist, we have the ability to positively affect our staff and, in turn, inspire them and help them to make positive impacts in their work and lives.

Consider whether you are a leader who leads with optimism. If you are interested knowing where you are on the scale of optimism, take the Optimism Test.
developed by Seligman at http://www.authentichappiness.sas.upenn.edu/testcenter.aspx. If you are not satisfied with the result, there are steps you can take to re-direct yourself to more positive attitudes, positive thinking and action. One approach is to re-frame events by identifying negative thought patterns and replacing them with more helpful or adaptive thoughts. It does take effort, but remember that negative thinking can be changed. Start by banishing negative remarks from your conversations. When you catch yourself thinking a pessimistic thought about an event in your life, first evaluate the evidence. What are the facts not the fears? Next, think about alternate explanations and outcomes. Practice this and you might find that you simply feel better with this new positive attitude. Additional avenues for increasing your optimism include reading good self-help books, injecting humor into your responses and interactions with others, and maintaining balance. Other specific practices could include observing those instances in which you discount the positive, neglect your well-being, play the role of victim, or over-generalize one negative situation. An optimistic attitude will help you deal with prevailing circumstances with fortitude and patience. It is never too late to change, and that change may bring with it better health and a happier life.

We cannot choose how many years we will live, but we can choose how much life those years will have. We cannot control the beauty of our face, but we can control the expression on it. We cannot control life’s difficult moments but we can choose to make life less difficult. We cannot control the negative atmosphere of the world, but we can control the atmosphere of our minds. Too often we try to choose and control things we cannot. Too seldom we choose to control what we can ... our attitude.

— John Maxwell (“Developing the Leader Within You”)

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Transformational Leadership’s Impact on Team Performance
Jo Ann Smith, University of Central Florida

If I could solve all the problems myself, I would.
— Thomas Edison, when asked why he had a team of twenty-one assistants.

Abstract
One of the stimulating aspects of our profession is working with some of the most brilliant and cutting-edge thinkers in the world that are dedicated to solving significant and complex problems. Being involved in supporting researchers keeps the research administrator on their toes and gives them unique challenges beyond those in most any other profession. I find it both invigorating and extremely challenging. Facilitating the efforts of pioneering researchers can create complicated administrative circumstances that have never arisen before or at least situations new to us and our organizations. As the complexity of the problems faced by researchers intensifies, our work becomes more complex as well. Often following the established policies or processes is not suitable and we must think critically about how to resolve these new challenges. One of the approaches scientists are using to tackle complex research questions is to work in teams. As a matter of fact, teams are more prevalent in every type of organization today, including research administration. Because of this growth in the use of teams within various organizations, social scientists have been researching teams and team performance. One primary question being analyzed is what types of leadership styles work best when working with teams? This article will describe the growth and significance of teams and how transformative leadership (TFL) can positively impact the performance of teams in research administration.

Growth and Significance of Teams
As science pushes our researchers to new heights in discoveries and innovations, we find the complexity of the issues intensifying. A term used to refer to these complex societal problems is wicked problems. Wicked problems are multifaceted and require the collaboration of experts from different scientific disciplines to examine and develop successful solutions. The science of team science has documented the benefits of working in transdisciplinary and multidisciplinary teams in the research literature (Brown, Harris, & Russell, 2010; Fiore, 2008; Wuchty, Jones, & Uzzi, 2007). Not only are researchers seeing the necessity and benefit of working in teams, there has been exponential growth in the use of teams in almost all organizations. This can be attributed to the fact that teams are ideal for forming solutions to complex challenges that are more effective and efficient than if a team approach is not used (Hackman, 2011; Salas, Stagl, & Burke, 2004). Today, leaders that approach solutions to problems or challenges alone are at a disadvantage. I have witnessed this scenario many times when decisions are made without the benefit of a multiple-faceted team; unfortunately in those cases researchers are impacted negatively due to unperceived and unintentional outcomes. In a recent report related to the future of American research universities, Fenwick (2012) affirmed the critical role research administration...
has on research productivity--research administrative units “can either present a significant barrier to the success of the faculty” or “promote and enable institutional success by providing the faculty with a significant competitive advantage” (p. 50). Teams are one way to effectively address problems in research administration that will give our research organizations a competitive edge.

Leaders in research administration are finding that teams work well when confronting complex problems that may involve internal and external units within an organization or university. Teams allow us to emerge with solutions that are more effective, comprehensive, and innovative in accomplishing their mission of reducing research administrative burden and maintaining compliance, accountability and transparency within our organizations. The need and increased growth in the use of teams in research administration can be attributed to multiple trends which include:

◆ Issues facing research administration are more demanding and complex (Shambrook, 2012; Yaeger, 2011)

◆ Challenges and fragility among research administration offices caused by fluctuations in research funding, increased regulatory compliance, increased collaboration and coordination required across multiple organizational divisions each with a specific research management or operations task such as financial management, risk management, policy development, facility safety, information technology, etc. (Fenwick, 2012)

◆ The increase of specialization in our profession interferes or makes it more difficult to communicate among the entire spectrum that typically falls under the research administration profession (research development, pre-award, post-award, compliance, financial management, export control, technology transfer and commercialization, etc.) (Smith & Torres, 2011).

The changes mentioned above have themselves created additional demands that require a team effort to effectively address. These include the need for: continuous training and education, innovation in structures for more productivity, and the redesign of business processes using technology for increased transparency, accountability and efficiency (Yaeger, 2011).

The Business Dictionary (www.buisnessdictionary.com) defines a team as:

A group of people with a full set of complementary skills required to complete a task, job, or project.

Team members (1) operate with a high degree of interdependence, (2) share authority and responsibilities for self-management, (3) are accountable for the collective performance, and (4) work toward a common goal and shared rewards(s). A team becomes more than just a collection of people when a strong sense of mutual commitment creates synergy, thus generating performance greater than the sum of the performance of its individual members.

Team performance is often associated with process-oriented projects that use a team-focused approach rather than a task-oriented focus. Naturally, interpersonal
relationships among the team members have a significant impact on determining the level of team performance. Three critical team constructs that impact successful team performance are:

1. **Team Cohesion** – Defined as the level of motivation for the team to continue working together (Shaw, 1976). Team cohesion and team performance have been identified as having a positive correlation (Dionne, Yammarino, Atwater, & Sprangler, 2004).

2. **Team Communication** – Healthy team communication includes listening, providing feedback, and openness to suggestions. Dionne et al. (2004) identified several studies that found good communication among team members improved team performance (Dyer, 1987; Zander, 1994; Swezey & Salas, 1992).

3. **Conflict Management** – Conflicts occur when two or more members of the team disagree. It can be detrimental if it impedes the team’s ability to accomplish their goal(s). Otherwise Dionne, et al. (2004) states that managed conflict serves a positive role by stimulating alternative solutions or approaches to solving the problem, and can inspire innovative ideas and creativity.

These three team attributes are important because they focus on the interpersonal relationships among the team members. When interpersonal relationships suffer it can create dysfunctional teams, which is worse than not having teams. Dysfunctional teams can damage organizational morale and decrease a teams’ productivity by engaging members in disputes or the formation of barriers that ultimately interfere with the productivity of an entire team. Leaders can play an important role in maintaining a healthy and functioning team. Therefore, both the leadership of teams and the teams themselves are strategically important to generate positive performance and to strategically achieve organizational missions. Leadership style has also proven to have a significant influence on team performance and productivity.

**What is Transformational Leadership?**

Transformative leadership (TFL) was first identified and studied by Bass & Avolio (1994). Transformational leaders are said to have four major behavioral attributes: intellectual stimulation, individualized consideration, individualized influence and inspirational motivation. The two leadership styles that are most often compared with each other are the TFL and the more prevalent Transactional Leadership style (see Figure 4120.16-1). Transactional Leadership is a more readily practiced leadership style in many organizations (Bass, 1985; Hater & Bass, 1988; Liu, Liu, & Zeng, 2011). Generally speaking, Transactional Leaders exchange one thing for another. This exchange may include material and non-material rewards such as greater job security, recognition, a special bonus, or simply receiving positive feedback. Those that successfully complete their tasks as assigned are rewarded and those who fail are punished with negative feedback, disapproval, and/or disciplinary action. Transactional Leaders like to have clearly designated roles established and will delegate well-defined tasks to be carried out as specified. Transactional leadership can be effective because they have an understanding of those under their direction and will provide rewards and punishments in accordance to the performance and
outcomes of those they lead. Transactional Leaders emphasize following established processes and rules and tend not to be comfortable with initiating innovation or challenging the status quo. In contrast, Transformational Leaders appeal to those they lead by aiming at higher aspirational ideas, ethical standards, and values. Transformational leaders promote the connection of team members to each other by putting the good of the team as a priority and focusing on a shared vision. TFL is geared more toward promoting the adoption of innovation and change to produce strategic outcomes. Transformational Leaders tend to look at the big picture, focus on long-term goals, and the development of new talent and leaders. A research study conducted by Liu, Liu, & Zeng (2011) found that in working environments where there is direct contact with clients or in providing a direct administrative service function, TFL had more positive effects on team innovativeness than transactional leadership. Other studies have also indicated that overall team performance is improved when using the transformative leadership style (Dionne et al., 2004; Bass, 1985, 1988).

TFL originally was considered a leadership style used only for the highest levels of management, but with the flattening of organizational hierarchies and technological advancements, this style has been effectively incorporated at middle manager levels improving workplace performance and job satisfaction (Bass, 1999, Bruch & Walter, 2007; Spreitzer & Quinn, 1996). Atkinson & Pilgreen (2011) also identified TFL as an effective leadership style for research administrators who are often “required to be savvy and use leadership skills that promote collaboration, the individual, and the intellect because information produced by the organization is ever-changing and fluid” (p. 3). Bass and Avolio (1994) identified four behaviors of TFL (Figure 4120.16-2).

Transformational leaders alter organizational climate by connecting those they lead to shared values and high ethical standards, and by using “a balanced approach to achieve short- and long-term results” that will strategically improve performance (Northouse, 2012).
Transformational Leadership and Team Performance

Dionne et al. (2004) identified how the four major attributes of the TFL correlated with the three team performance elements needed for high performing teams (see Figure 4120.16-3). The TFL behaviors related to Idealized influence and Inspirational motivation are shown to promote team cohesion. The TFL factor for Individualized consideration is shown to positively impact team communication and knowledge transfer, and finally, Intellectual stimulation is shown to positively influence the management of conflicts in teams. Figure 4120.16-3 illustrates practical application of the TFL behaviors that would increase team performance.

<table>
<thead>
<tr>
<th>TFL Behaviors</th>
<th>Team Attributes</th>
<th>Application of TFL to Teams</th>
</tr>
</thead>
<tbody>
<tr>
<td>Idealized influence</td>
<td>Cohesion</td>
<td>Transformational leaders can positively influence the cohesion of those they lead by promoting trust among group members through the creation of shared values, high ethical standards, and focusing on the importance of the shared group mission and vision.</td>
</tr>
<tr>
<td>Inspirational motivation</td>
<td>Communication and Knowledge Transfer</td>
<td>Transformational leaders communicate and encourage individual talents, coach, mentor and promote learning and professional development through team members’ attendance at professional conferences or other workshops and provide opportunities for those they lead to share knowledge with other team members.</td>
</tr>
<tr>
<td>Individualized consideration</td>
<td>Conflict management</td>
<td>Transformational leaders can effectively manage team conflicts thorough effective listening, encouraging the use of rational thought, valuing alternative approaches or perspectives on a single issue, and keeping the focus of the team on the shared mission over individual agendas.</td>
</tr>
</tbody>
</table>

In summary, with the changes in our profession and organizations and the increasing complexity of the problems we face with researchers and as research administrators, it will take creativity, innovation and team effort. Leaders of teams need to know how to build team cohesion, communication and knowledge transfer, and manage conflict. Today’s research organizations need more transformative leaders in research administration, especially when the organizational environment warrants improvement and the adoption of innovations to facilitate effective changes that are critical to increasing research productively and efficiency.

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¶4120.17  Creating and Maintaining Effective and Innovative Teams
Karen Woodward Massey, Harvard University

Author’s Note: This article will attempt to give you concrete tools and goals to choose a team, get it off to the right start (or restart), and foster innovation so that the team can perform extraordinarily, think outside the box, and sustain itself for as long as necessary.

When thinking about starting a project it is important to first ask yourself “Do I need a team?” Teams can take longer to do things and require extensive coordination to work well. If facilitating meetings, communicating, and coordinating is not your forte then don’t form a team or instead find someone else to partner with who can help you. Planning, organization, communication, and trust are all keys to effective teamwork. If the team doesn’t address all of these things and more, it might be better to do the project yourself, or to delegate it to someone else.

That said, teams are essential when one person can’t do it alone (Mind Tools, Ltd, 2009-2011).

Diverse teams can be great at complex problem solving because multiple perspectives allow the team to see most, if not all, sides of the problem. Great satisfaction also comes from working with a high-performing team to explore options and make the necessary missteps to produce exemplary innovative work. Finally, teamwork is especially important when a complex problem or project requires change management. The more people can be involved and have suggestions incorporated into the work, even tangentially, the more buy-in is created. People who have buy-in naturally support and advocate for the project.

Long Term Teams vs. Ad Hoc, Project Based Teams
There are two types of teams (Mind Tools, Ltd, 2009-2011). The first type is the official, long term team: people you work with every day, colleagues participating in

![Figure 4120.17-1. The Five Dysfunctions of a Team]

1 This article is reprinted from NCURA Magazine, Volume XLIV, No. 5, September/October 2012. It is used with permission of the publisher.
standing committees, or the members that lead an organization (NCURA Regional advisory committee work comes to mind). These teams are probably not of your choosing, and can pose particular challenges when one is working with people who are volunteering their time. As a new manager you may inherit a team, as a long term manager you may have the luxury of populating your team over months or years. One would think that as a supervisor you would be allowed to direct others to do what you want, exactly how you want it. However, savvy managers know that making someone do something is much less effective than allowing them to choose what they want to do, steering them towards work that plays to their talents, and giving them the autonomy to do the work in the manner that the employee wants. For the most part, long term teams are made up of people that you did not choose and they pose particular challenges to teamwork, especially if bad habits are entrenched. Helping this type of a team to become effective and innovative can be especially challenging. However, some of the information in this article can be applied to long term teams as well as ad hoc, project based teams.

Ad hoc, project based teams are different in that you, as an organizational leader, probably have more control over who you choose. In addition, the project or mission, of the team is most likely pretty clear from the outset. The ultimate “due date” may also be clear. For instance, the program committee of an annual conference knows that they need to plan and carry out a conference to be held on a certain date. However, everything else about how the team will operate, what the culture will be, who will do what, specific milestones, etc. is open to interpretation. Finally, these working groups are temporary in nature and must be adjourned at some point, hopefully with a celebration of success and a record of how the project was accomplished. In the case of a program committee for an annual conference, the members of the following year’s committee may be completely different. However, they may appreciate knowing how the committee was structured, who did what by when, etc., so that they don’t have to reinvent the wheel.

**Team Theory: Forming, Storming, Norming, Performing, and Adjourning**

Bruce Tuckman introduced the above team development model in the article “Developmental Sequence in Small Groups” (Tuckman, 1965), ultimately adding the Adjourning stage. Here it is in a nutshell:

**Forming**

People are introduced to each other, are positive and polite, excited and anxious, the team facilitator plays a key role in setting the tone and expectations with the group. A formal or informal team charter is a great thing to create (see below for more). At the least, the group leader needs to help the group define what the goals, deadlines, culture, and processes for accomplishing the work are.

**Storming**

Team members jockey for position, and try to figure out who will do what and how the project will be accomplished. Some people may question the scope of work of the project. It is important for the team leader to encourage professional discussion
and debate at this point. The team needs to consider all options and be honest with each other in order to move to the next stages.

**Norming**

Hierarchy and roles are established, processes and structures are created, team members hold each other accountable and ask each other for help, everyone commits to the group goal. Storming may still happen but Norming becomes more and more prevalent.

**Performing**

Aided by the structures, roles, and processes established in previous stages, team members work hard to progress toward team goals and achieve results. The team leader is able to delegate the work and help individuals develop themselves.

**Adjourning (or, “Mourning”)**

When the project is finished, or the team is disbanded for other reasons, it is important to celebrate lessons learned and achievements. If the team is high-functioning, members have developed close working relationships. Acknowledgement and celebration is crucial to the creation of future teams. Documentation of roles, processes, and lessons is especially important if this is a project (such as planning an annual conference) that will need to be re-created periodically.

**Forming: Research, Diversity, and Agreeing on Direction**

The three most important aspects of starting a project are researching, determining who will be on the team, and reaching consensus with the team on what will be accomplished, how it will happen, and what success will look like.

**Research and “External Activity”**

According to the book “X-Teams: How to Build Teams that Lead, Innovate, and Succeed” (Ancona, 2007), teams must always be observing and communicating with people and groups external to the team.

Before you choose team members, consider who the major stakeholders in the project will be. For instance, if you’re forming a team that will develop Responsible Conduct of Research (RCR) policy, procedures, and pedagogy your institution’s chief compliance officer is probably a major stakeholder. Departmental staff are also stakeholders in that they may be needed to identify who has to take RCR and track who has taken it. Principal Investigators may be needed to design and teach the courses. The Dean may need to provide monetary support. If you take the time to identify stakeholders it may be possible to invite representatives of each major stakeholder in order to get maximum diverse perspectives and, ultimately, a broad range of support for the project and/or team.

Great teams will also research within and outside their organization to see if anyone else has already attempted or succeeded at what the team is trying to do. Another consideration is how this project fits into the goals of the organization. RCR
may be extremely important to the office for sponsored projects but when resources are tight and no one has ever been audited or fined for non-compliance it may be pretty far down on the institutional risk assessment list. You can help the project to ultimate success by doing at least some of this research before the team is convened.

Diversity of Strengths
If you have the luxury of inviting people to the team this is where you, as a leader, can set the team on the path to success. If you are inheriting a team you can still set the team on the path to success by considering some of the following factors, keeping the structure of the team flexible, allowing current members to play to their strengths, and by adding team members as necessary. The book “Strengths Based Leadership, Great Leaders, Teams, and Why People Follow” (Gallup, Inc., 2008) details four types of people that should be included in any team. It is unlikely that one person has all of the traits listed after each type but I have attempted to encapsulate them below.

Strategic Thinkers: People Who Plan
Strategic Thinkers are people who find it easy to plan and organize. These include people who are analytical, like to research and put things in context and who think ahead. They may also be fascinated with ideas and make connections between things that, at first glance, seem to have no commonality.

Executors: People Who Do
People strong in execution like to achieve things that will make a difference. They believe in fairness and like to take time to choose the right way forward. They are disciplined and have the focus to finish what they start. If they take on something they will follow it through, no matter what. They may also be natural problem solvers.

Relationship Builders: People Who Glue
Relationship builders are the people who hold the team together. They are adaptable, like to develop people, enjoy connecting with others, and can easily understand where others are coming from. They may also be able to instinctively assess other people and pinpoint how team members can best help the team move forward.

Influencers: People Who W.O.O.
Influencers are very good at getting projects started and, once the project is in progress, in Winning Others Over. They have great communication skills and wide networks and they can easily identify people outside the team who are needed to maintain and ensure the success of the project. Influencers may be comfortable taking charge and may automatically exude the confidence needed to keep people going.

Agree on Direction via Team Chartering
We have already discussed identification of stakeholders and considering team goals in the context of organizational goals. These are two things that should be discussed and agreed upon in a formal or informal team charter. A charter will help the
team get off to the right start, or may be used to jump start a team that is not working cohesively (Mind Tools, Ltd, 2009-2011).

There is no “right” way to create a charter. Just the act of considering and coming to consensus on some of the following questions allows the team members to get to know each other and to start to work together. Questions that the team may want to address include:

◆ What is the scope of work/problem to be solved?
◆ Has any work already been done that can help us?
◆ How will the team communicate with each other?
◆ How will the team be structured?
◆ What are the project milestones?
◆ What is the timeline for results?
◆ What will each team member be expected to do?
◆ What will individuals specifically be in charge of/responsible for?
◆ What support does the team need to succeed?
◆ When will the team meet and what will be accomplished?
◆ How will meetings be run?
◆ What will happen if someone can’t attend?
◆ How often should team members check in with each other and review what has been accomplished?
◆ If a team member is having trouble accomplishing something, who should he/she talk to for help?

Again, negotiation and agreement are keys to this process. The team doesn’t need to agree on each item necessarily, but everyone should be on the same page and working towards the same goals.

As a leader, you will have to do a lot of work to prepare for these initial meetings, as a facilitator you set the tone, introduce people, try to create a safe environment where everyone’s voice can be heard and “speed bumps” are allowed. It is also your job to ensure that everyone knows what has been decided, what the next steps are, and who will try to accomplish what by when.

**Storming: Challenges to Great Teamwork**

Before I get into the challenges inherent to team work, I want to emphasize that the Storming phase is essential to creating a great team. As team members jockey for position, and debate how and when the project will be accomplished, they build trust and respect for each other. They become brave enough to be honest and express how they feel, and they learn to focus on the issue and not make things personal. It is the leader’s job to help the team work through this stage, focusing on individual development when needed and ensuring that the team is truly reaching consensus.
The team, however, must deal with growing pains in order to blossom.

Everyone who has been part of a team or who has led a team knows that it is easy to miss the mark. The book “The Five Dysfunctions of a Team” (Lencioni, 2002) does a good job of identifying root causes of some of the challenges (see the pyramid at the beginning of this article).

Trust is the foundation of all effective teams. Trust is engendered when people come to know each other’s strengths and are able to take the time to build relationships with each other. Lack of trust is exacerbated when the team is separated by distance and must communicate via email and telephone. If trust is present and if team members respect other’s perspectives and talents then members can stay focused on the project instead of taking things personally, making discussions into diatribes where other team members are vilified, or staying silent because they don’t want to “rock the boat.” Debates are a healthy part of moving through the Storming phase. If a team can manage to steer through them and reach consensus then they will be able to commit to the project, even if they may not agree with certain aspects of how the project will get done.

Another challenge comes when individual team members don’t want to work as a team. They may be star performers who get things done extremely well on their own terms but are unwilling to bend, communicate what they are doing, and stick to goals and schedules that the team has agreed to. When this happens it is the leader’s job to decide how disruptive this is to the team and, if needed, take steps to mitigate the problem. You may be working with someone that has a lot of experience, historical knowledge and has put a lot of work into the project or the organization. However, when a project is long term and/or titanic it is imperative to have people who are committed to teamwork, especially if the individual is taking on too much, missing deadlines, and/or disrespecting the team process. If this situation goes unchecked the work will be less satisfying and other team members will never be able to hold each other accountable for accomplishments because the work is not spread out. This may also result in a “blame game” when deadlines are missed. If lack of progress is always someone else’s fault then it is unlikely that extraordinary success will ultimately be accomplished.

Norming

Storming is an essential stage for team growth. It cannot be skipped because an effective team must be able to be honest with each other and work through conflict. When the Norming phase develops, the team may still revert to Storming occasionally but eventually the team will work out who will lead which effort and who will be responsible for which deliverables. The team will start to agree upon processes and structures, to hold each other accountable, and to ask each other for help. Eventually, everyone will be able to commit to the group goal or will decide to leave the team (literally or figuratively) by not attending or participating in debates, etc. At the end of this phase, a leader will want to scope out a seat in the dugout and let others step up to the plate.
Performing: What does a high-performing team look like?
The best teams reach a point where they can operate effectively without the leader and can take it in stride when individual members depart or join the team. These teams have trust and respect for each other, hold honest debates about issues, and are committed to the project and to each other. They are also great at holding one another accountable and, ultimately, accomplishing results. If a leader is lucky enough to shepherd a team to the Performing stage her focus may be able to shift towards developing individual members of the team, and helping the team communicate successes to stakeholders.

Adjourning/Mourning or Sustaining the Team
Ultimately, the leader and the team must work on identifying the conditions needed to sustain the team indefinitely or decide when and how the team should be adjourned. If there is good reason for the team to continue team members and leaders may need to be replenished periodically or permanent staff may need to be hired. If it is determined that the team should be adjourned then it is important to assess what went well, what could be done differently next time, and how satisfied the stakeholders were. There may also be records/systems/processes that can be documented and forwarded to the next team. Also, the closer a team has become the more important it is to allow yourself and individual team members to “mourn.” This is a little extreme, perhaps, but there is a loss to disbanding a team, and it is wise to be aware of it (plus, “Mourning” is a better rhyme than “Adjourning”).

In any case, temporary teams and long term teams should be encouraged to take the time to celebrate their success. This helps people to look forward to the next project and creates good will amongst team members and stakeholders alike.

Final Thoughts on Innovation
Innovation is a catchphrase in today’s workplace. It is synonymous with creativity, taking risks, and thinking outside the box. In order to foster an innovative team, the group must be encouraged to be flexible and gain inspiration by reaching outside itself. The team should always be aspiring to learn from the world, from each other, and from people in all strata of the organization. The more a team can connect across networks the more likely it is to be able to innovate and find the resources and gravitas to succeed (Ancona, 2007). Teams must have the time to be creative and must be encouraged to take risks, even if this means that they might take longer to succeed (Pink, 2009).

Thank you for taking the time to read this article. If you found it helpful, please consider attending the session of the same name and/or the Drive Book Club at the NCURA Annual Meeting in November 2012. Questions and comments may also be addressed to the author. kwmassey@fas.harvard.edu.

References


**About the Author**

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The Art of Facilitation: Maximizing Others’ Contributions

Jeffrey Cufaude

[Senior Editor’s Introduction: The author was the facilitator at the adult learning workshop sponsored by NCUIRA immediately preceding the last Annual Meeting. This article very much captures the themes of that workshop. As research administrators, facilitation is a large part of what we do on a daily basis.]

If leadership is about doing the right thing and management is about doing things right, then facilitation is about helping individuals and groups do the right thing right.

Indications are everywhere that we need individuals at all levels of an organization to possess facilitation skills: more work is being completed in cross-functional teams and internal or external partnerships; more decisions are being made collaboratively in consultation with others; and a yearning for greater community in organizations comes at a time when the diversity of perspectives, talents, and cultures present in the workplace is increasing.

Though facilitation might most be associated with a workshop or strategic planning process when an external consultant is hired to facilitate the program or process, it actually is a fundamental skill any individual can master.

The Essence of Facilitation

Facilitation encompasses a wide range of skills and techniques that allow individuals to more effectively accomplish common organizational tasks: leading department or team meetings, managing conflict among colleagues, presenting training workshops and professional development programs, or coaching individuals. The essence of facilitation can be summarized in five major themes.

Facilitation makes connections and helps make meaning. In a fast-paced environment overloaded with information, the need for connections is great: connections between individual people, connections between ideas and concepts, connections between projects and mission or vision, etc. When facilitating, individuals are listening for and seeking to make (or help others make) the connections between what is occurring in a conversation and what has occurred in other places or at other times. Effective facilitation involves periodically asking the question, “So how does this discussion connect with others we have been having?”

Facilitators always seek to connect comments made by various individuals in a workshop or meeting; i.e., “How does Bill’s observation relate to what we discussed earlier this morning?” Because facilitation involves deeper and more active listening, a facilitator likely has a greater overall sense of the connections present among disparate threads of conversation. The facilitator must pose questions and use techniques that help group members make these connections, as well as identify the meaning behind what is occurring: “What stands out most for you about the

1 This article is reprinted from NCUIRA Magazine, Volume XLIII, No. 1, January / February 2011. It is used with permission of the publisher.
conversations today? What are the relevant implications we need to consider as we move forward?"

Facilitation is providing leadership without taking the reins. Some see facilitators’ as “flipchart patsies,” individuals who stand at the front of the room and merely note on the flipchart what others say. The fact that group members often do not see facilitators taking control of the group is by design, not by accident. Individuals using a facilitative approach provide leadership to the group without actually assuming a more formal leadership role.

When group members (be it in a workshop or a team meeting) do not themselves share ownership of the group and its outcomes, any commitments made are likely to lack sustainability. Too often, individuals abdicate their leadership responsibility to the facilitator. “Oh since Jeffrey is facilitating I don’t need to be concerned with group process, making connections, etc.” In order for groups to realize their full potential, every individual must be concerned with the good of the whole, even if a designated facilitator is assigned that primary responsibility. Because of this, facilitators more often are seen asking rather than telling groups exactly what they need to be doing ... helping them move forward rather than directing their movement.

Facilitation balances managing content and process. Individuals using a facilitative approach are concerned both with what the group is discussing or deciding, as well as how they are actually doing it. A decision made without consideration of its impact, the diversity of perspectives possible on the decision, the other alternatives available is a decision that may not be the right one.

Effective facilitation often involves working with group members to establish some shared agreements for how they will have their conversations with each other ... the group process aspect of their work. The facilitator then uses these agreements as guidelines for discussions and as evaluation criteria for how well the group actually accomplished its charge: “We’ve made some significant decisions today. When you reflect on the conversations that led to them, how well did we do on the agreements we established earlier?”

Some individuals too quickly dismiss group process as “soft stuff” that keeps groups from the real work of making decisions. In command and control hierarchical organizations, less attention to group process might be acceptable. But in the more collegial environment of most associations, individuals want their perspectives considered and their contributions and ideas solicited and appreciated. As a result, individuals leading groups and teams must share the facilitator’s commitment to appropriately balancing attention to content and process. As the old adage suggests, people are more likely to support what they help create.

Facilitation helps surface unacknowledged or invisible beliefs, thoughts, or patterns. One of the real values of external facilitators is that they help a group identify and discuss the important issues that group members themselves might be unaware of or unwilling to address. While this role can be more difficult for an internal colleague serving as facilitator to play, it is still a necessary one.
Call it what you want—the dead cow on the table, the elephant in the middle of the room, or the skunk smelling up the place—most groups have some issues they need to discuss in order to move forward on key decisions and efforts. Effective facilitation uses gentle (or in some cases forceful) questioning to help bring those issues to the surface: “What are the real issues we have yet to discuss today?”

A common strategy I use is to ask session participants to note anonymously on an index card what they believe most needs to be addressed, but is unlikely to be brought up by anyone during the day’s conversations. I collect and shuffle those cards and then read them all aloud. Doing so gets the issues into the room so participants can now face them without some of the political pressures associated with having actually been the one to bring them up.

Facilitation focuses on building the capacity of individuals and groups to accomplish more on their own, now and in the future. Facilitation is not just about the immediate task, it also is about helping a group or team learn together so that they might be more productive in the future. Similarly, a manager coaching an individual employee is not focused just on an employee’s immediate need, but with laying a foundation for

**Figure 4120.18-1. Facilitator Fundamentals**

Individuals wanting to become more effective facilitators in their own organizations would look to develop their abilities to do the following:

◆ Use active listening skills including paraphrasing, summarizing, reflecting, and questioning
◆ Encourage and generate participative discussion in groups
◆ Help stimulate creative thinking through use of brainstorming and other idea-generation processes
◆ Stimulate strategic consideration of alternatives and informed decision-making of appropriate choices
◆ Manage contrasting perspectives and opinions that might result in conflict among members of a group
◆ Intervene with individuals and groups without taking total control of the situation
◆ Design meeting processes to accomplish a wide range of goals and objectives
◆ Draw out others’ ‘opinions’ in an objective and nonjudgmental manner
◆ Support teams in various stages of group development
◆ Help individuals and groups reflect on their experiences and capture relevant learning
◆ Lead or design inclusive group processes that honor individuals’ different learning and participant styles
◆ Help shape more powerful and strategic questions for exploration
future strong performance.

This long-term definition of success also helps keep facilitators from assuming too much leadership of a group. Doing so could leave group members unable to manage their future conversations or efforts without the facilitator being involved. To prevent such dependence from developing, effective facilitation requires having individuals and groups debrief their meetings, workshops, and planning sessions to reflect on how they did what they did and what lessons can be learned for their future efforts.

“We’ve had a great day of strategic planning. Let’s take 15 minutes and talk about what we’ve learned about your ability to engage in strategic conversations with each other. What are some lessons worth remembering for your future work together?” Simple questions like these help focus a group’s attention on an area they might otherwise ignore. This reflects the facilitator’s capacity-building commitment.

Making the Commitment to Facilitate

All of us can add the role and lens of a facilitator to our relationships with others. Making a commitment to do so, however, needs to be done thoughtfully. But in choosing to do so, you must do so with authenticity, one of the hallmarks of the full-time facilitator. As the Sufi philosopher Rumi says, “If you are unfaithfully with us, you are causing terrible harm.” Appropriating a few techniques learned in a workshop or from a book without authentically incorporating them into your overall leadership identify will cause them to be seen and experienced as insincere or manipulative.

Any time we choose to alter the “normal” style most individuals would associate with our work, we need to be sensitive to how that change might be perceived and received. If you are viewed by your colleagues as a real “take charge” type of person, shifting to a strong facilitation stance will be seen as a dramatic change, one that could lead them to question your intentions.

Rather than changing overnight, you will be better served by gradually introducing a greater commitment to the essence of facilitation in your regular interactions with others. When you find yourself about to tell someone or a group what to do, pull back a bit and ask a thoughtful question that might help them discover for themselves what most needs to be done. When you feel a conversation is becoming too narrow invite the group to consider alternative perspectives. When you need to coach an employee on a job-specific issue, make sure to probe if other relevant issues are what actually need to be discussed.

Rigid lines between leadership and management are often drawn in the professional literature, almost suggesting that one is right and one is wrong. In reality, organizations need individuals who both do the right thing and are capable of doing things right. Organizations also need individuals who can help individuals and groups do the right things right ... the very nature of facilitation. Each of us has the ability to commit to adopting the perspective and making the contributions to a conversation that we might associate with a designated facilitator standing outside the group. If more people choose to add facilitation to their skill set, we are more likely to experi-
ence sustainable commitments and successes on behalf of our organizations.

Unsure if you can effectively adopt a facilitative stance as part of your overall leadership repertoire? Perhaps the following advice from Rainer Maria Rilke in *Letters to a Young Poet* can offer you some guidance: “...your doubt can become a good quality if you train it. It must become knowing ... and the day will come when, instead of being a destroyer, it will become one of your best workers—perhaps the most intelligent of all the ones that are building your life.”

**About the Author**

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Psychological Contracts and the Employment Relationship: What Managers Should Know
Bonnie S. O’Neill, Marquette University

It’s probably safe to say that most managers are familiar with the concept of “contracts.” Depending on the organization and its characteristics, recruitment and hiring activities may occasionally require managers to negotiate and establish some type of employment contract—whether explicit (formal) or implicit (informal)—with job candidates. Even in the absence of a formal employment contract, when an offer of employment is made and accepted, both managers and employees typically develop expectations about the employment relationship which result in perceptions that an implicit contract exists between them. And, even though the original employment contract may or may not be formally altered by either party at some point in the future, patterns of obligations develop between the parties based on day-to-day interactions. Inevitably, these obligations ultimately become part of the organization’s social structure. As a result, employees may begin making assumptions and develop expectations that they can alter their relationship with the employer. Such assumptions and expectations take the form of an implicit contract known as “psychological contracts.”

Historically, psychological contracts were examined from the employee’s perspective, since the organization’s interests were thought to be adequately represented by the existence of company policies and practices (e.g., via company handbooks). More recently, however, the key role of the immediate manager has been examined relative to creating and influencing employees’ psychological contracts, since they are the individuals who develop high levels of closeness (both physical and psychological) with their direct reports. Such closeness typically begins during the recruitment and hiring process, and it increases during their day-to-day supervision of employees’ tasks. What is interesting about focusing on the role of immediate managers is that the organization cannot always guarantee that the manager is working in the best interests of the organization. Rather, he/she may be working towards their own self-interests (e.g., promising early raises or promotions to an applicant they want to hire even when policies require a specific length of time before raises/promotions can occur). Although a discussion of managers’ dual roles as an agent representing the organization’s interests and representing their own self-interests raises a host of interesting questions, that discussion is left for another article, at another time!

One important challenge managers often face regarding employees’ psychological contracts is that their cognitive nature makes them unseen. However, the implications of psychological contract evaluations by employees can be observed in the behavioral outcomes that result from such evaluations, especially when discrepancies or inequities are thought to exist. In other words, employees regularly evaluate the promises they believe have been made to them and how well they have been fulfilled. A simple example is provided to illustrate this point.

In some organizations, despite the lack of formal policies relative to when overtime can be worked, certain employees may regularly work extra hours dur-
ing the week in order to leave early on Friday afternoons. At some point in time, it becomes understood—though not explicitly stated—that this practice is acceptable. As a result, one or both parties may feel an obligation to continue the practice for a variety of reasons (e.g., to balance workflow, to better manage customer deadlines, to maintain employee morale, to name just a few). Therefore, although it was never promised to employees that this practice can—and will—continue, employees may perceive that the organization has made such a promise to them by allowing the practice to continue. As a result, they believe that the organization now owes them Friday afternoons off from work when extra hours are worked beforehand. Subsequently, any change to this practice by the employer is likely to be perceived by the employee as a breach or “violation” of their psychological contract. Managers and co-workers may hear the affected employees uttering attitudes such as, “It’s not fair; we’ve always done this in the past!”

In the example above, since a formal contract or company policy is nonexistent regarding the “extra work hours/Friday afternoons off” practice, managers may wonder why employees are reacting so negatively to any changes affecting this practice. Despite pressures from customers or clients for additional service on Friday afternoons, employees may feel as though the organization is reneging on a promise they believe was made to them. What managers are overlooking in this example are very clear attitudinal and behavioral reactions to a perceived psychological contract breach. Such reactions could be mild, and result only in short-term grumbling as employees adapt to the change. However, it is far more likely that breaches manifest themselves in employees’ feelings of anger, betrayal, distrust and, perhaps, a loss of faith in the employer’s good intentions. Employees experiencing a minor incident are not typically making judgments about psychological contract breach. Psychological contracts (and their violation), however, are viewed as more intense than simply the anticipation one attaches to the receipt of certain rewards or benefits. This is primarily because of the level of trust many employees have with their organization. Individuals develop attitudes relative to their jobs (e.g., job satisfaction, organizational commitment, intent to stay/leave) that involve more general beliefs about respect, codes of conduct, and a variety of other patterns of behavior that are associated with the employment relationships. Since attitudes are learned predispositions to behave consistently in a certain manner, they are not likely to change merely as a result of a one-time disappointment or an occasional unmet expectation. Instead, researchers tend to agree that psychological contract violations are much more commonplace, which suggests that employees are frequently making psychological contract evaluations that go well beyond relatively simple feelings of anticipation. As a result, it is far more common for employees to respond to psychological contract violations by reducing their contributions to the organization (e.g., taking longer lunches, calling in sick for relatively minor illnesses, arriving late for work) or in more extreme situations, by leaving the organization altogether. Despite the recent rise in employment opportunities, the market for most job-seekers is still rather limited. Therefore, it may be difficult for an employee to leave his/her organization in the face of psychological contract violations. So, when discrepancies persist over a longer period of time, judgments of unfairness can linger, causing a host of unanticipated negative outcomes.
for the employer, including workplace deviance, lower job satisfaction, reduced commitment to the organization, and greater absenteeism and tardiness. Although we may not see direct costs associated with these behavioral outcomes, any well-seasoned manager or human resources professional can tell you the indirect costs that result from these types of negative outcomes!

A question you may be asking yourself (in addition to, Why did I start reading about this?) is, what triggers employees to begin thinking about their psychological contracts, and is there something I can do now? Even if you had not yet gotten to the point of asking yourself that second question, it is a logical question for good managers to consider. Although psychological contracts exist between individuals and the organization, most individuals are not likely to simply wake up in the morning thinking about them. Something must prompt an employee to compare perceived promises to perceived fulfillment in order to evaluate his/her psychological contract. In other words, until some sort of comparison is made, fulfillment (or breach) determinations have not taken place and may theoretically never be made. One of the key drivers of psychological contract evaluation, however, is uncertainty. When employees face uncertainty in their organizations (something that has been commonplace for many years now, especially given economic conditions in the U.S. and abroad), individuals are prompted to seek comparative information. Uncertainty makes us feel uncomfortable, and we begin to scan the environment for clues as to what is happening. Accordingly, this increased employee vigilance also leads to more perceptions of PC breach.

Some researchers (including this author) have argued that there are a variety of common HR activities that can cause uncertainty and/or convey commitments and inducements to individuals on behalf of the organization. Such activities provide an excellent starting point for identifying trigger events that result in psychological contract evaluations. Some common activities may include: updating existing job descriptions, procedural changes within the department or organization, making recruiting decisions, compensation decisions, attending training events, creating or updating personnel manuals, and updating employee benefits. In addition, research on how individuals make sense of things describes situations that provoke an individual’s switch from an automatic mode (i.e., noticing) to a more conscious cognitive processing mode. Researchers identified events involving the individual that were likely to trigger this switch, such as conducting performance reviews, engaging in career and succession planning, assessment activities, role shifts that encompass promotions or transfers to a new job, job loss, or new employees entering the organization. Sensemaking goes beyond simply noticing something in that noticing involves activities of filtering, classifying, and comparing things in our environment. Sensemaking, however, refers to more active interpretations of an activity and determining what the noticed cues mean. For example, individuals might compare job duties from a prior position with current job duties to help make sense of their current obligations. This is especially common for newcomers to an organization. Individuals might also compare current job accomplishments with established performance goals, especially when performance review time rolls around. And, what
employee has never made a comparison between his/her current job situation and some ideal job? Each of these activities involves interpreting and making judgments about comparisons we are making relative to our job experiences. Accordingly, these judgments can trigger employees to consider their psychological contracts and the degree to which they have been fulfilled or violated.

Psychological contract triggers are not limited solely to comparisons between promises made at the time of hire and present conditions. Instead, employees engage in comparisons throughout their employment. For example, annual benefit changes are frequently driven by current market forces and, in an effort to better manage skyrocketing costs; we have seen many employers modifying employee contributions toward insurance premium increases. Although this may be a potentially unavoidable action, it also sets the stage for perceptions of breach, especially when employees are asked to contribute toward benefits that may have previously been provided at no-cost or very low-cost. Here, managers need to actively manage breach perceptions not only with realistic job previews at the time of hire, but they must make concerted efforts to actively involve employees in the change process and provide regular and on-going communication regarding efforts to effectively manage costs. Failure to do so can trigger employees’ psychological contract evaluations, resulting in some of the negative outcomes discussed earlier.

Despite the somewhat somber and cautionary tone so far, there is some good news for managers. Recent research suggests that when employees perceive their organization to be supportive, they are more likely to exhibit citizenship behaviors (e.g., extra role behaviors) within the organization. In other words, they are more likely to help out co-workers when they need it, they may go the extra mile in providing top-notch customer service, or they may be more likely to support long-term organizational change initiatives. In addition, trigger events such as attending training sessions, mentoring junior colleagues, or networking with individuals at other firms—particularly if facilitated by the organization—may actually decrease breach perceptions. When employees believe that managers are interested in them, they are more likely to view psychological contracts as fulfilled. Management can also mitigate potential breach perceptions by focusing on fairly executing procedures and processes and by more actively promoting trigger events that are viewed favorably by their employees. Knowing what such activities are, though, requires managers to maintain open lines of communication with their employees. The positive evaluations that result from such activities, though, are likely to contribute towards the development of positive psychological contract perceptions now and in the future. At a minimum, they enhance trust between managers and employees, which tends to increase overall job satisfaction and organizational commitment.

Finally, managers should try to involve employees in decision making and make explicit efforts to treat all employees fairly (although not necessarily equally). And, conventional wisdom dictates that managers communicate, communicate, and communicate some more about upcoming changes and why they are necessary. Doing so will reap positive outcomes when the inevitable psychological contract evaluations occur.

Newspapers and social media are rife with examples that highlight how many
of these managerial behaviors may be declining. Many employees report feeling more overworked than ever before, and there has been a significant increase in the use of part-time and contingent workers. Managers need to take time to identify, understand and manage the trigger events in their organizations that are most likely to lead to both positive and negative perceptions of fairness, and focus their efforts on effectively managing those events most salient to employees.

In conclusion, the reality of most contemporary organizations is such that individual motives for power, control and personal outcome maximization vary as a result of differing perceptions of how well mutual obligations are fulfilled throughout the employment exchange. Admittedly, there are likely to be a variety of differences between employees with varying lengths of tenure, not the least of which is their concern over the changing nature of work. Understanding how the changing work environment leads to perceptions of psychological contract breach can help mitigate threats against the relationship and trust that seasoned workers have developed with management and may also help establish stronger relationships among newcomers. Such efforts will not be wasted!

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¶4120.20  It Starts with You: Five Ways to Build an Outstanding Team
Donna Obeid, Stanford University

Teams change the world. From U2 to the Harlem Globetrotters to the Saturday Night Live cast and crew, we’ve been in awe of the work of great teams.

Throughout my career in instructional design and development, I’ve had both the privilege of collaborating with teams so strong they seemed almost magical and the misfortune of witnessing a few rather lousy teams. Through it all, I’ve learned some secrets to cultivating a great team. Here are five of them:

1. Develop and Implement a Mission Statement and Goals.

A mission statement is your department’s compass…without one, it’s going to be very difficult to know which direction you’re all headed. If you don’t already have a mission statement, develop one. A strong mission statement should be 2-3 sentences long and should answer these questions: What do we do? How do we do it? For whom? What value do we bring? Once you have a mission statement, post it on your website and talk about it often.

Then consider your team’s goals, for if the mission statement is the compass, the goals are the map. Every team needs both organizational goals and individual goals – these should be as specific as possible and focus on the bigger picture of what is ultimately trying to be achieved. I recommend utilizing the S.M.A.R.T. goals model to assist you.

SMART goals are Specific, Measurable, Attainable, Realistic and Timely. An example would be: By August 1, develop a 10-class training program so that staff can increase competency, streamline procedures and provide more effective customer service.

Dedicate a meeting for your team to brainstorm on what specific things they’d like to see the department achieve. After the meeting, organize the goals into a manageable document which is distributed to the whole team. Then develop an action plan on how the goals will be achieved, by whom and by when. Including everyone in the development of goals gives everyone a chance to be heard and increases the likelihood that goals will eventually be reached. Why? Because teams that fully understand the purpose of what they do are usually more engaged than teams without this focus. Goals – and transparent goals at that – play an enormous part in how your team members feel day-to-day, as well as in their long-term success. Strong leaders talk about goals on a regular basis and know the importance of connecting overall organization goals with individual performance goals.

2. Create a Training Program that Empowers Employees.

I’ve spent the last year developing an empowerment training program for the Engineering Research Administration team at Stanford. I began with an initial analysis and assessment of needs before collaborating with subject matters to design and develop ten courses. Classes – each no more than 1.5 hours in length – were then implemented and evaluated for effectiveness through surveys and feedback. Informal
one-hour ERA Connect sessions were also added as way for staff to exchange ideas and further connect with those who may be in seated in different buildings.

It hasn’t all been easy. I’ve faced challenges in integrating training tools and workshops with the workloads, pressures and deadlines that make up so much of the job of a research administrator. But the training program has gone a long way in terms of increasing competency, streamlining processes and empowering our staff members.

Each of us needs to be committed to being lifelong learners. A training program that focuses on positive change goes a long way in terms of building team.

3. Build An Employee Recognition Program.
In his article Recognizing Employees Is Critical to Retention, Chad Brooks discusses a workplace survey of more than 400 employees in various industries. The results of the survey reveal the key to keeping employees happy is to recognize them for their hard work. Nearly half of those surveyed said they would leave their jobs if they didn’t feel appreciated by their managers. We can’t help it…each of us wants to be recognized for a job well done!

Last year, we developed the Gold Star Recognition program in our department to recognize one employee each month for their extraordinary contributions to the organization. We aligned the program according to the three pillars of our mission, namely, to deliver outstanding customer service, ensure compliance and provide solutions. Individuals are nominated by their peers and receive a $50 gift card as well as a printed certificate to hang on their cubicle wall. The results have been terrific. Everyone wants that gold star!

If you don’t already have an employee recognition program in place, considering starting one. If you can’t provide a gift card, perhaps a certificate and announcement will do. Whatever it takes, always celebrate achievements. Recognition is a great way to bring out the strengths of your teams, increase morale and encourage the weak performers to step up to the plate.

4. Encourage and Develop Employee Strengths.
Great leaders know how to instinctively recognize an individual’s strengths and align these strengths to the success of the team. While it’s no easy feat to do this, teams that focus on building and connecting strengths reap far more reward than teams that take the hands-off approach. Who in your department is a strong writer? Who excels at analytic skills? Who can easily discuss the best way to navigate through Fastlane or Grants.gov?

Bring out your employees’ talents and strengths by encouraging them to lead a committee, develop new tools, apply for a conference, give a presentation at an upcoming staff meeting, etc. This is the way employee gain awareness not only of their strengths but also of the strengths of their colleagues. It’s your job as a leader to tie individual strengths and goals with overall organizational goals. Doing so creates something of a happy and healthy village whose members cannot help but want to keep making things better. As Henry Ford once said, “If everyone is moving
forward together, then success takes care of itself.”

5. Create an Unforgettable Employee Retreat.

Last summer, we had an employee retreat for the purpose of simply building team and learning something new about ourselves and each other.

Our theme was: Amazing You. We spent months planning for the retreat and decided that rather than hire an outside company who would charge us well into the thousands, we’d do it all ourselves. We booked a room in a location that was filled with natural light and away from our normal workstations. We sent out invitations and encouraged everyone to attend. We had specific goals and a task plan for the event and stuck with them.

On the day of the retreat, we served breakfast and lunch, had an Amazing Race, a guest professor, games and activities. We gave away One Day Off prizes and t-shirts. We did all this on a shoestring budget, creating our own riddles, finding a guest speaker who’d present for free, and serving healthy but simple food. The result? Our staff were talking about the retreat for days, even months later. People learned more about each other from one day than they had all year. I encourage you to develop your own retreat…it’s a perfect way to get employees out of their cubicles, learn new things together and just have fun.

In summary, the five strategies I’ve mentioned here can be effective ways to build team in almost any workplace. Change of course is never easy for people and many of the suggestions I’ve given here are indeed that – change. Some people won’t understand the value of a mission statement or won’t understand the need for goals or simply won’t see the reason for training. And just when you think that everyone has heard the same message and clearly understands it, you’ll likely see that you’re wrong. That you’ll need to communicate your message again. And again. And again….

You’ll need to be committed on educating employees on the reasons for the change and how it benefits each of them as well as the organization. You’ll need to be committed to maintaining a transparent leadership by encouraging a feedback-rich culture and addressing the tough questions. Keep people informed. Talk about moving forward together, leaving the past behind. Doing so builds the sort of trust and respect between leaders and employees that is in fact at the very core of every outstanding team.

About the Author

Donna Obeid is a Training Specialist in the School of Engineering at Stanford University. She has served as an instructional designer for more than fifteen years, developing learning programs for government offices, private corporations and universities. She served as a visiting university lecturer in Northern Thailand where she lived for two years. Donna earned a B.A. in English Literature from the University of Michigan as well as both an M.A. in Teaching and M.F.A. in Creative Writing from American University. She enjoys yoga, magical realist stories, and photography, maintaining her own website at www.donnaobeid.com
Leadership of One: How to be a Leader at a Predominantly Undergraduate Institution

Jeanne Viviani, New College of Florida

It isn’t hard to find all manner of leadership resources these days. From the well-known ones such as Stephen Covey and John C. Maxwell, to more recent ones by Sheryl Sandberg, it seems everyone has something to say about leadership. There are books, magazines, journals, and blogs. In fact, I own a few prominent books myself. They are sitting quite majestically on my bookcase right now, with a thin layer of dust coating them. I promise myself that one day, I’ll get to them. Instead, I troll Twitter, tumblr, YouTube, Facebook and other sketchy platforms and content to glean what I can to stay current (or at least appear to be) and motivated (always). Take for example, writing an article on leadership. I start by Googling “leadership resources”. Sixty-seven million hits is pretty respectable, but I work in a Primarily Undergraduate Institution (PUI) so I adjust the search and look only for “leadership resources in small organizations.” Five million hits! Great, but as I skim the first few pages of hits, I realize the links focus on small business. Small departments or organizations? I get nada, nothing, zero, zilch. The quantity of resources on leadership in a small organization or office such as a college or university is lacking or practically non-existent (not a scientific study, but I’m at a PUI and I don’t have lots of time to do a literature review, okay?). I guess the expectation is that leadership doesn’t exist if you are a party of one (or two).

As research administrators, our professional organizations are not just a source of professionalism; we commiserate and socialize just as much as we ask questions and offer advice. In fact, the PUI group has the most discussion posts out of any list on Collaborate (nearly 300 more discussions than the next highest, in fact). Does this mean research administrators at PUIs are just more inquisitive, confused (both?) or does it mean that they know they have to reach-out and connect to be better at what they do? Does anyone really care about your leadership when you also have to be the manager, the accountant, the contract reviewer, the meeting scheduler, and at times, even the caterer for your campus events? When you are pulled from one meeting to the next, writing up email after email, filing a myriad of forms (some you made up too!) and trying to work on important projects, leadership skills are not only necessary, but crucial especially if you have to “go it alone.” Although there are copious resources on leadership, in our field, I have found that four specific areas make the biggest impact. Constant and effective communication skills, building strong campus and community relationships, maintaining content expertise and being able to stretch way outside of our comfort zones are critical to strengthening your leadership.

Effective Communication

A typical day of “leadership” might include: following up on a proposal and review (aka create) a budget and justification for a stressed Principal Investigator (PI), setting up an ad hoc committee to review National Endowment for the Humanities (NEH) proposals, negotiating with a vendor to get a better price on a small contract,
reserving campus space to host an information session for students applying for internal grants, and finally, meet with the Provost to discuss institutional metrics. Communication: Rinse, repeat.

All of these things are just activities — things you have to do every day to get the job done. What you are specifically doing in the process is communicating your leadership every day to a variety of groups. From the faculty and students to boards of directors and vendors, they look to you as the source for all things sponsored research. Being a small operation, I like to think of PUIs more like a “boutique” department. We may not have all the answers for complex things like clinical trials or technology transfer, but we are great at working with our PIs on a one-to-one basis. Know your strengths in communication and use them to building upon your leadership. For instance, do you hate email but your PI always asks questions that way? Try spending a little more time on that email, but pick up the phone to talk with others. We all like to be communicated with in our preferred way and that builds up trust and stronger relationships.

Building Relationships

Closely aligned with communication, relationship building is crucial in our positions at small places. Not only do we depend on the work of others to accomplish our department’s goals, but we have to foster good relationships and work on more difficult ones, if we want continued success. Much like the PI that prefers email when you would rather meet face to face, try scheduling a meeting once a month with the PI to just check in and see how things are going.

Externally, we often find ourselves forming relationships with other institutions and vendors for our awards. We have to work with our internal audience (although sometimes begrudgingly) just as much, if not more than with our external audiences. At a PUI, we often times work with local businesses. Even though some of these mom and pop stores have a hard time working on a line of credit, a positive working relationship can mean positive returns in other ways (for instance, campus delivery of a quick needed item for a PI). It means taking extra time and effort to cultivate the relationships for the sake of your department but also for the institution as a whole.

Maintaining Expertise

If you go it alone (or in my case, with one other person), then who are you leading? Is it really just a time management function or are you being strategic with your resources? Being a leader at smaller organizations means being observant, learning about the other systems and needs on campus and making time for professional development. In our strapped budgetary times, it may mean we cannot attend conferences or travel as much so it requires being creative. Online webinars, books and taking time to talk and work with others at PUIs goes a long way for maintaining our expertise (given our particular institutions of course). As mentioned earlier, it should be no surprise that the PUI community is the most active community. With limited resources, PUI members reach out to one another far more often. Think of it like the office water cooler — by not having other research administrators or senior staff to bounce ideas off, we jump onto Collaborate and reach out.
Stretching the Zone

Finally, as an extrovert, people perceive me as not needing help in this area. It is true that I can get up in front of hundreds of people and speak, but I do have comfort zones that introverts are better equipped to work. For instance, introverts tend to be better listeners. I recognize that to get out of my comfort zone, sometimes I have to take a back-seat which pushes me out of my comfort zone of being in charge all the time. Stretching out of your zone might also be more difficult when you go it alone and have to get the day to day job done. However, while we may be at small institutions, we have the advantage of learning about other parts of the institution easier. If you have strong campus relationships (see area two mentioned above), you could spend time with a colleague in the business office, the development office, facilities or student affairs or attend campus search committees for new faculty to see who may be a future PI! Stretching doesn’t consume a lot of time, but you will have a much broader knowledge of your own institution and capabilities to be a better research administrator.

If you focus only on one of the areas listed above, you still are working on your leadership. What is most important is that you are intentional about it. Make the decision to work on your communication for a week or call up a colleague in accounting and take her out to lunch to ask about what challenges she is experiencing with the audit (come on, you know you want to know about that!). No matter what, don’t just assume you are doing these things — know you are doing them. Even though there are plenty of leadership resources you can access, when going things alone, sometimes the best advice is just do it!

About the Author

Ms. Jeanne Viviani is the Director of the Office of Research Programs and Services (ORPS) at New College of Florida, the State’s Honors College. Since developing and establishing the office in 2003, ORPS has processed hundreds of grant applications, developed college-wide programs and projects, cultivated donors and sponsorships, and worked closely with faculty, staff and students in securing external funding for various needs and projects. She and her staff manage all grant and contract funds to ensure proper compliance with all federal and state audit requirements. Additionally, she is the Human Protections Administrator for the NCF Institutional Review Board which is responsible for ensuring all human subject research on campus is reviewed for ethical conduct. Finally, her office promotes and encourages scholarship and research presentations by students, faculty and staff. Events such as the New College New Scholars Showcase and the Academic, Research and Creative Scholarship Conference provide community-wide attendance and understanding of the academic and research efforts of our students, faculty and staff. She received her Master of Public Administration in 2000 and a Bachelor of Arts in International Studies and Economics in 1993 from the University of South Florida. Prior to New College, she has worked in many different government offices such as the Department of Navy with the U.S. Marine Corps, the U.S. District Court in the Middle District of Florida, Psychosocial Oncology at H. Lee Moffitt Cancer Center and the Hillsborough County Public Defender’s Office. She can be reached at jviviani@ncf.edu
Leadership and Work-Life Balance
Laura Letbetter, Georgia Institute of Technology, Robyn Remotigue, University of North Texas Health Science Center in Fort Worth

Stress is endemic to the profession of research administration. Many leaders struggle to balance the competing demands of their work and personal lives. Leaders must also consider their impact on the work-life balance of those who look to them for direction or guidance. Work-life balance is so essential that it was selected as one of eleven measures of country well-being for the Organization for Economic Cooperation and Development (OECD)'s Better Life Index. According to this study of 34 democratic market-based economies, work-life balance is as important a measure of well-being as housing, income, jobs, community, education, environment, governance, health, life satisfaction, and safety.

Unsurprisingly, the United States ranks well in most of these areas, but below average in work-life balance. This pattern seems to hold true in research administration, a profession in which members can reasonably expect to attain decent housing, health coverage, some sense of community, relative safety, and a certain level of job security, but are likely to struggle with work-life balance due to the high pressure nature of the work. Christine Katsapis (2012) found that research administrators experience high levels of occupational stress and role ambiguity. Perpetual deadlines, heavy workloads, intense competition, and high levels of risk and accountability are familiar features of the work environment. Jennifer Shambrook (2012) examined research administrators’ perceptions of stress and found a significant increase in perceived work stress, number of hours worked, work/family conflict, and working while sick between 2007 and 2010. She concluded that there is a great need to develop strategies for raising awareness about stress resiliency among research administrators.

As work environment sociologist Tracy Brower (2014) observed, “We’re faced with unprecedented time poverty – too many demands and too little time to meet them all.” Our use of technology to overcome time poverty solves some of our problems but creates new ones. E-mail, text messages, voice mail, video conferencing, electronic application and grant management systems, and smart phones enable us to be away from the office without ever really being away. As Boris Groysberg and Robin Abrahams noted, constant juggling prevents meaningful engagement, hampers initiative, and erodes performance, both at work and at home (2014). So while technology offers us a way to be physically present in our personal lives, it can also be quite invasive. Leaders must also consider how their own ability or inability to manage technology impacts the team. Unlimited accessibility creates an unrealistic model for the team and implies a lack of trust in others’ decision making abilities. Rather than strive for twenty-four hour availability, Groysberg and Abrahams advise leaders to make careful, conscious choices about how, where, and when to be available.

It is increasingly popular in business and academic contexts to speak of work-life integration as opposed to work-life balance. Brower described the concept of balance limiting in its either/or focus and prefers the concept of integration: “Bal-
ance sets up unfortunate trade-offs. A better alternative is the concept of work-life integration. With work-life integration, we can accomplish abundance in all the aspects of our lives – in our careers, with our partners, with the children in our lives, in volunteer and community events, and for ourselves.” Wharton management professor Stewart Friedman declared “balance is bunk;” similarly arguing that integration is a much better metaphor for what we are trying to achieve. A Michigan State University team has even suggested that by providing employees with some training on how to better integrate work and life, managers can magnify positive work experiences in ways that enhance individuals’ personal and family lives. Ilies, Wilson, and Wagner (2009) explained the phenomenon of spillover as follows: “Affective work-family spillover typically means that work-related moods or attitudes are carried home, or that family-related moods or attitudes are carried to work.” The team conducted a study of 101 university employees who, with their spouse or partner, participated in surveys of how their job satisfaction affected their feelings and attitudes about their family role. The team found evidence of spillover not only in employees’ self-reports, but in what their spouses or partners reported as well. This finding suggests that leaders would do well to consider the ripple effect of work-life balance issues on the lives of those to whom their employees are closely connected.

Friedman described specific skills, suggests exercises, and offers other simple techniques for leaders to become more real, whole, and innovative in ways that have a positive impact on their own lives and the lives of those who look to them for leadership. Leaders can use these exercises themselves and can provide opportunities for their teams to do the same. One exercise developed by Friedman to help individuals work toward work-life integration is called four circles. This exercise invites us to take a closer look at the various roles and responsibilities in our lives. The first step is to draw four circles representing work, home, community, varying the size of the circles to represent the relative value of each. The next step is to move the circles around, thinking about how they overlap and whether they are compatible or in opposition. The purpose of the exercise is to allow individuals to reflect upon and consider adjusting their priorities based on their values, goals, interests, and actions. Those who are interested in trying it can use the free online website: www.myfourcircles.com. Friedman also suggested simple, straightforward tips for creating separation from work, such as prohibiting phones at the dinner table, as well as tips for merging work and home life, such as inviting a co-worker to a neighborhood party.

While integration might be a more novel and complex metaphor than balance, it is not necessarily better in all cases. When we discuss on-the-job stress in informal conversations with our colleagues, we are not likely to comment that we’re not feeling very integrated today. Moreover, leaders who seek integration must respect the perspective of others who may find a binary or segmented approach more appropriate for their own lives. Regardless of the language in which we choose to express it, we are all seeking a similar endpoint, a sense that our lives are well managed and that we are fulfilling our responsibilities to our colleagues and to our loved ones.

In addition to reflective exercises and options for personal development such as
the four circles activity, leaders need a repertoire of specific and practical strategies for supporting work-life balance in the lives of those who look to them for leadership. Kouzes and Posner’s five practices of exemplary leadership offer a useful framework for leaders who want to consider implementing specific strategies for creating a more balanced and/or more integrated work environment (2011). These oft-cited practices are modeling the way, inspiring a shared vision, challenging the process, enabling others to act, and encouraging the heart.

*Modeling the way,* of course, means leadership by way of example. As Brower observed, “Leaders send important cues through their own behaviors and choices so how they approach their work sets the tone for how their team members will perform.” Kouzes and Posner noted that leaders’ simple daily acts, such as telling stories, are key to showing others what is expected. For example, the leader who briefly mentions that she will be away from the office on Tuesday to attend a child’s school play or to take an elder to the doctor sends a message that the organization understands that caregivers have important responsibilities. Another simple, everyday example of modeling is the timing a leader chooses for sending emails about tasks that need to be accomplished or issues that require resolution. A leader who finds it convenient to send those emails early Saturday morning might consider the expectations created by the time stamp. He or she could choose instead to hold that email as a draft and click send on Monday morning, or even automate an email rule that releases the message at a more appropriate time for the team member. Modeling the way can be subtle, yet powerful.

Leaders should also *inspire a shared vision* of balance and/or integration. Inspiration is more subjective and therefore more elusive than modeling. As Kouzes and Posner described it, “Leaders engage others in tying their personal dreams to the aspirations of the group to create a shared vision.” For example, a leader who is a staunch believer in work-life integration may need to engage with others who actually embrace a more either/or approach and find segmentation preferable to merging. In this case, the leader should be less focused on a shared metaphor and more focused on a shared sense that the time and energy we devote to various aspects of our lives is proportionate or otherwise appropriate.

Sharing an *inspired vision* can also involve collaborating with your partner and/or family. Leaders with strong family lives mention time and again the importance of sharing a vision of success for everyone at home and not just for themselves. Many successful leaders have partners or spouses who share common goals that include both their home life and career. In fact, leaders emphasize the importance of complementary relationships for creating balance in their lives. In many cases, the emotional support and participation of families or loved ones gives leaders the courage to take risks or embrace new opportunities in their careers. Spouses or partners can also provide guidance in decisions and help them keep each other’s eyes on what matters. More important during tough times, deliberate choices can be made about work, travel, and the household.

Including one’s entire family on a five-year plan is a way to bring balance to one’s career goals in a deliberate and conscious way. For those who have children,
involving them in the process of goal setting can provide valuable life experience. In a 2011 concurrent session on career planning, NCURA member Sue Rivera, Vice President for Research and Technology Management, Case Western University, explained that five-year plans are really important for focusing on one’s goals in a balanced way. Her family has a five-year plan, and they revisit it annually to make adjustments. Sue strongly recommends factoring in family milestones that may affect one’s career timeline. For example, if you can’t move for a job until your children graduate high school, pencil it in. If your partner is about to start a medical residency, factor that in as well. Writing it down makes it real. Once you draft your plan, with one row for each family member, look for potential conflicts and adjust accordingly. Then, put your family plan somewhere visible. It will be a healthy reminder of what you are striving for, and it will make you a more empathetic leader when you consider that the lives of your staff are equally complex.

*Challenging the process* means disrupting the status quo when it is productive or appropriate to do so. Kouzes and Posner have said this means experimenting and taking risks. Telecommuting and flexible scheduling are considered risky in some organizations, and work culture remains more office-centered than it needs to be. Anne Marie Slaughter described the culture of “time macho” as “a relentless competition to work harder, stay later, pull more all-nighters” remains prevalent among today’s professionals. If the culture of time macho is prevalent in your work environment, it is a process worth challenging for your own sake and for the sake of those you lead. Slaughter noted that in-person meetings can be far more efficient than phone or e-mail tag; trust and collegiality are much more easily built up around the same physical table; and spontaneous conversations often generate good ideas and lasting relationships. While her focus is women in the workplace, her observations about why the culture of “time macho” is damaging to work-life balance are applicable to both genders. Leaders may find that the risk of offering a telecommuting option even one day a week or allowing staff to adjust their schedules around local traffic patterns pay off in terms of productivity and esprit de corps.

*Enabling others to act* means involving others in decision-making and goal-setting in order to foster teamwork, trust, and strong relationships. Groysberg and Abraham suggested that truly prospering involves integrating work and family in making decisions about work and activities. Ilies, Wagner, and Wilson suggested that managers can enhance their employees’ well-being at home by deliberately scheduling positive events and interactions toward the end of the work day. An obvious application of this idea would be to invite staff input on when to schedule certain work events and interactions. For example, if employees find team meetings to be a positive and energizing experience, those would be better scheduled toward the end of a workday. If, on the other hand, such meetings cause additional stress by causing employees to worry about how they will manage their workload when part of their day is occupied in a meeting, then it would be best to get the meeting out of the way early in the day. Leaders strengthen their teams sharing the power and discretion while building trust among members. This can also be fostered by listening to their personal needs.
Encouraging the heart means supporting our basic human need to be valued and appreciated. It means recognizing when team members feel frustrated and exhausted, acknowledging those feelings, and making sure people understand that their contribution really matters. Jennifer Shambrook (2012) showed that while responsibilities have increased due to the greater competition in research funding and the decrease in staff support, changes are taking place in research administrators’ perceptions of respect and appreciation. Her 2010 survey respondents reported feeling more appreciated and respected by colleagues than her 2007 respondents; however, the percentage who reported not feeling appreciated was still quite high at 38.15%. We believe leaders should be aware of this finding and should pay careful attention to creating a work environment where people feel valued and appreciated. Kind words go a long way toward making people feel valued. Besides the intuitively obvious reasons for being kind, the latest data in organizational research supports the idea that showing compassion significantly increases productivity and reduces turnover and health care costs (Seppälä, 2014).

Today’s leaders must make deliberate choices about which opportunities to pursue, which to decline, how to use their time, how to utilize technology without allowing it to be invasive, and how to empower their teams to do the same. By making careful, deliberate choices, they can meaningfully engage in their relationships and responsibilities at home, at work, and in their community.

References


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People First, Business Second — The Building Blocks Needed to Achieve Research Compliance
Roseann Luongo and Denise Moody, Harvard University

Research administrators are continuously challenged to develop, communicate, manage, and enforce institutional policies and federal regulations with many internal and external constituents to include faculty, researchers, central and department administrators, peer institutional collaborators, sponsors, agencies, and auditors. As a prime example, the 2014 Office of Management and Budget (“OMB”) Uniform Guidance has recently gone into effect, and research administrators have been collaborating nationwide to ensure their institutions are fully compliant. However, at the same time, faculty and researchers are faced with burden as described in the National Science Board report on Reducing Investigators’ Administrative Workload for Federally Funded Research (2014), which recommends changes such as modifying proposal requirements and annual progress reports, eliminating ineffective regulations, streamlining requirements across federal agencies, and increasing efficiencies at universities.

What is the key to achieving research compliance while not overburdening our faculty and fellow administrators? In our experience, we feel that there are five (5) key competencies that a research administrator needs to establish to effectively balance customer service and compliance:

◆ Strong working relationships
◆ Trust
◆ Collaboration/teamwork
◆ Communication
◆ Customer service focus

The competencies will be further discussed in the following sections.

Strong working relationships

If trust is our foundation, then strong working relationships are the mortar that helps us to build effective and productive organizations to help us achieve the research mission. Strong working relationships are strong internal or external partnerships, developed over time. The need for these relationships should not be underestimated. In our field of research administration one must leverage both technical expertise and relationship building skills to be the most effective in their roles. Our work, whether we are in pre- or post-award, is so collaborative that it requires us to work with people from different departments, agencies, companies, countries, and schools.

We invest time into developing strong levels of expertise through training and other methods, and we must have that same commitment to developing working relationships. Developing and managing our relationships help institutions build strong internal control systems of compliance. These systems include strong com-
munication, clear roles and responsibilities, collaborative business processes, and effective monitoring procedures.

Strong relationships and trust enhance our customer service ability, facilitate enforcement of policies and procedures, and help us accomplish tasks. They can make having a difficult conversation about unallowable costs, write-offs, or non-compliance a little easier. In another example, an established relationship with an IRB administrator may help when you need a protocol expedited — you won’t only know who to call, but you will also know the person on the other end of that call who may be more willing to go that extra mile to help you in an urgent situation.

Keys to developing strong working relationships include the following:
◆ **Focus on people 1st, business 2nd.** It is important to make a personal connection first; once you have established the basis of your relationship, the business naturally follows. You must build relationships and mutual respect with administrators and faculty FIRST before trying to enforce compliance.
◆ **Respect opinions.** We may not always see eye to eye with colleagues or administrators, but it is important to try to understand their point of view on issues. Once you take the time to understand where they are coming from, you can hopefully come to an objective conclusion, whether agreeing, agreeing to disagree, or negotiating a compromise.
◆ **Listen and communicate.** Active listening, or being present in a conversation and paying attention to what someone else is trying to say is essential to creating a valued partnership. Effective working relationships also need frequent, open, relevant and direct communication. Our colleagues and faculty need information, in varied forms and times, depending on the situation. We need to be flexible and adapt our communication styles according to the individual and the need at any given time.

**Trust**
Warren Buffet once said, “Trust is like the air we breathe. When it’s present, no one really notices... when it’s absent, everyone notices“. Trust is as critical to working relationships as air and breath is to life. Trust is the foundation of our relationship with our sponsors. If sponsors do not trust that our institutions could manage research funds with care nor were committed to following through with the work that was proposed, then they would not grant us research funding. The same methodology is also critical to our relationship as research administrators with Principal Investigators (PIs) and collaborators. If PIs and collaborators did not trust our expertise and commitment to the work, then they would not rely on us for advice nor invest in our relationship. The foundation of our relationships with sponsors, PIs, employees, and collaborators is trust and is as important as the “air we breathe”.

How can we build trust? There are many ways to build trust in a working relationship, including the following key areas:

1) Build a network of collaboration and teamwork through time and shared experiences
2) Communicate openly, frequently, and honestly
3) Provide a high-level of customer service through responsiveness and following through

Without the framework of these key areas, there can be no trust.

**Collaboration/teamwork**

Forming strong working relationships and building trust with your colleagues and faculty fosters a more collaborative, team-building environment that lends itself to accomplishing the task at-hand. Federal regulation updates often result in an institution’s need to develop new or update existing policies, procedures, and/or systems. Often, institutions are provided a short turnaround time for development, communication, training, and implementation in response to a federal mandate. Therefore, people and resources must be rapidly and strategically organized to problem-solve and implement the necessary changes. Policy, procedures, and/or systems updates must be implemented in full collaboration with the key constituents. NCURA’s Cynthia Nichols states “Regulatory compliance and excellence in the conduct of research can only be achieved by cooperation between the research office, the principal investigator, the compliance officer and committees, and an institutional climate that fosters a high level of integrity” (2013).

Successful teamwork and collaboration will result in better understanding of and a higher compliance rate for adherence to the new regulation. Successful teamwork is a result of a consensus-driven approach rather than a top-down approach and must be formed on the basis of trust. A team leader must be strong and have the ability to steer a team in the right direction while producing timely and effective results. However, Scott Spreier states, “A leader’s hunger to achieve…fuels innovation, productivity, and growth… But taken to an extreme, overachievers command and coerce employees rather than coach and collaborate with them… eroding organizational performance, demolishing trust, and undermining morale” (2006). In other words, collaboration is essential. Ronald A. Heifetz states that while “It’s tempting to go it alone when leading a change initiative…It’s also foolish. You need to recruit partners, people who can help protect you from attacks and who can point out potentially fatal flaws in your strategy or initiative” (2002).

When new policies, procedures, or systems are developed, ensure that the team is thoroughly represented and that there is sufficient time to allow for feedback from an even wider constituency. If a policy or system is released without vast user input, the likelihood that people will support, understand, and adhere to the requirements is reduced. Alternatively, successful teamwork and wide collaboration foster mutual understanding and support for even the most onerous of new federal mandates.

**Communication**

Effective and thorough communication is essential as a research administrator, especially when conveying a new policy in response to a federal regulation update, which can often be perceived as onerous or contentious. First, communication internally within the research administration office is essential, since these “front-liners”
are the staff members who must fully understand the policy and/or systems updates, respond to any questions from external constituents, and ensure compliance with the new federal regulations. Internal staff training should focus on the reasons behind the policy (the “Why”) in order to clearly communicate and provide an explanation to other administrators and faculty.

Next, communication externally to faculty, department administrators, and other central offices must be effective and efficient. The media type, timing, and content for communication must all be taken into account when conveying a message such as a release of a new research policy. The communication must reach a broad audience, contain the most relevant points, and be easily understood. How often have you received an email blast at your institution that conveys a new institutional policy, but you stop reading after scrolling once or twice down the page? Not only should a policy be easily understood, but the communication message regarding the policy should be even more succinct. Otherwise, the audience and the message are lost altogether.

**Customer Service Focus**

Successful research administrators view all of their constituents, including sponsors, faculty, administrators, and collaborators as their customer base. Knowing who comprises your customer base, or circle of key stakeholders, is important. This circle could be much broader than initially thought. Placing primary importance on customers’ needs helps to develop and sustain positive customer relationships, which is essential when attempting to develop and release a new policy in response to a federal mandate.

A positive customer service attitude requires social skills, one of Daniel Goleman’s components indicating Emotional Intelligence at Work. According to Goleman, “Socially skilled people are proficient in managing relationships and building networks and able to find common ground and build rapport… which leads to effectiveness in leading change, persuasiveness, and expertise in building and leading teams.” Social skill is “not just a matter of friendliness but friendliness with a purpose: moving people in the direction you desire” (2004).

Finally, good customer service requires the research administrator to listen first to the needs of the customer. NCURA’s Robert Holm and Tony Ventimigilia state “A leader should seek input, must want to listen, and must ‘actively’ listen” (2006/2007). The same traits apply to successfully developing and implementing a new policy or system in response to a federal update. Successful research administration and research compliance oversight involves first listening to the customer needs and then balancing those needs with maintaining compliance with the federal regulations.

**Conclusion**

The five key competencies serve as building blocks for a research administrator to achieve research compliance. Without these competencies in place, policy enforcement is nearly impossible. The common theme with all competencies is that people
come first, and the business side of research administration and compliance will follow. Mutual respect, greater listening skills, and collaborative teamwork can, over time, build effective relationships and trust. In the end, research administrators might (just might!) achieve full compliance through a collegial and even enjoyable process.

References

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Creating a Richer Life

Christine Pacheco, University of New Mexico

In this fast paced world, we often over-extend ourselves both personally and professionally and may feel there isn’t enough time to achieve many of the goals we set. As Research Administrators, we love our work despite the constant onslaught of complex issues, deadlines, liabilities, and pressures that come with the job. As we do our best to juggle work, families, community, and improvement of self, perhaps we wonder if there is a better way to successfully integrate all of these areas at once.

Stewart D. Friedman’s article, “Managing Yourself – Be a Better Leader, Have a Richer Life,” contains a number of insightful ideas and proven solutions for how to be a leader in all aspects of our lives. Friedman reasons that we can and should all work to be excellent leaders within the four realms of our lives: work, home, community and self. Integrating the four different parts of life, versus giving up one or more parts to have success in another, is how you can make sustainable changes. This is what he terms as the “four-wins” and leads to “Total Leadership.” “Total” because it involves the whole person and “Leadership” because it involves creating sustainable change to benefit you AND the most important people in your life.

To rack up four-way wins, consider what is important to you and what you would like to accomplish in the long run. Consider the most important people (“key stakeholders”) and the expectations you have of one another. Then, create a basic outline of small changes that will help you achieve the bigger picture. The bigger picture will affect all four realms (work, home, community, self) in a positive way and the smaller steps will guide you in pursuing your best leadership self. It sounds simple enough, but how do we achieve fulfillment by developing short-term changes?

The process that Friedman describes involves thinking, writing and talking about your values and vision, clarifying what is important to you as a leader, spouse, parent, community member, etc. and then determining how your actions and decisions impact your primary stakeholders. He suggests designing mini experiments that are tried for a fixed period of time and evaluated by you and your stakeholders. To help you craft experiments for your own situation, Friedman provides additional tools, success stories and linked information on his website at http://www.totalleadership.org. To be practical, he suggests narrowing down your first list to only two or three possibilities that are tried for short periods of time. Stretch and challenge yourself, but avoid creating experiments that are too daunting and over which you have little control to make adjustments as you move along.

Just as creativity, curiosity, controls and adaptability (and even fortuitous mistakes) are involved with the success of many research projects, so will be the case with many of the small experiments you might choose to undertake. If the experiment is not going well, you can stop and make adjustments. If it is going well, then

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you’ve just scored a win! Over a period of time, you find that you are spending your
time and energy on the people and activities that you’ve deliberately named as your
priorities. Other bonuses in the process are your growth as a leader in all realms of
your life, and the support of those around you (those key stakeholders, again), all
without excessive risk.

Is your experiment having the impact that you envisioned, or will you have to
regroup in order to focus on reaching your desired outcome? In designing an exper-
iment, you must chose to reflect on what will have the most impact and ultimately
benefit you in a positive manner, both professionally and personally. Friedman’s
Total Leadership concept describes successful experiments as those that combine
components of nine categories:

1. Tracking and Reflecting: journal habits, thoughts, and feelings for reflection and
to assess your progress. Examples: record the times that you provide positive
feedback to your employees or colleagues, record the number of times you exer-
cised during the week, your feelings about how you may have handled yourself
in requesting assistance from your team, or your plan for an upcoming project.

2. Planning and Organizing: develop a plan to better utilize

3. Rejuvenating and Restoring: set aside time to rejuvenate by focusing on your
mind, body and spirit. Examples: take time to participate in a fun activity (group
sport, yoga, reading, or hobby), quit unhealthy habits (smoking, drinking to
excess, or watching too much television), take a daily 20-minute walk on campus,
or take a vacation.

4. Appreciating and Caring: develop relationships and compassion for others in or-
der to respect and understand the whole person. Examples: encourage coworkers
to sign up for an aerobics class as a group, volunteer in your community, help a
colleague work on an area of concern within your university or schedule a retreat
for your team.

5. Focusing and Concentrating: stay psychologically focused and physically present
for those who matter most in your life. Prioritize, organize, and take action on
requests so that your important stakeholders feel appreciated and understood.
Examples: honor your commitments by sticking to your scheduled meeting
times, set aside time to return calls and emails, turn off your PDA while at home,
or schedule time daily for an open door to address issues that arise.

6. Revealing and Engaging: encourage communication by sharing more of yourself
with others and make yourself available to hear others’ concerns. Your values
will be better understood and you will gain explicit support from your stake-
holders if you are understood as a person. Examples: mentor a junior staff mem-
ber, share your vision with your team, or have weekly discussions with your
spouse about spirituality.

7. Time Shifting and “Re-placing”: think outside of the box by adjusting your
schedule to fit in desired activities while increasing efficiency. Examples: request
a flexible work schedule, work remotely, or take a class during your lunch hour.
8. Delegating and Developing: reallocate, reduce, or completely eliminate activities to free up time, work smarter, develop skills in yourself and others, and increase trust. Examples: hire an assistant, a work-study student, or delegate tasks to other employees.

9. Exploring and Venturing: implement steps and participate in activities toward a new job, more challenging work, or other activities that align your work, home, community, and self with your core values and aspirations. Examples: re-evaluate your current job and take steps toward job enrichment (becoming a subject matter expert, cross-train others), obtain a mentor or perhaps consider a new job or career, volunteer within your NCURA region, or join your children, family and/or friends to engage in the activity of your choice on National Service Day.

As you begin to consider areas within the four domains of your life that you would like to improve, realize that your experiments are works in progress. Measuring improvement and continuously reassessing your experiment will help improve your leadership skills. Friedman’s assessment tool will also enable you to reassess as your life changes and your commitments change.

Quoting Barack Obama in his speech on November 4, 2008:

“And above all, I will ask you to join in the work of remaking this nation the only way it’s been done in America for 221 years – block by block, brick by brick, calloused hand by calloused hand.”

This fundamentally represents Friedman’s “Total Leadership” concept. As a leader of change, you often have to take small steps and continually reassess and make further changes in order to overcome big obstacles and to witness benefits for the good of all. Small experiments are the small steps toward fulfilling the goals in all realms of your life.

**Resources related to this topic:**


Total Leadership Resources to include links to obtaining Steward D. Friedman’s book, his teaching tools and the 4-Way View chart, can be found at http://www.totalleadership.org/.


**About the Author**

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Replenishment Enhances Leadership Success

Riddick Smiley, East Carolina University, and Denise Moody, Princeton University

“Play so that you may be serious.”

—Anacharsis

As we embark on a new year with a fresh perspective and make resolutions to ourselves and to others, we decided to focus our first LeadershipTips article on the concept of Replenishment. Barbara Mackoff and Gary Wenet’s book “The Inner Work of Leaders: Leadership as a Habit of Mind” discusses the importance of leaders’ inner lives and cultivating the ability to recognize how our “habits of the mind” transform our natural personality traits. These habits form one’s leadership style; therefore, if we recognize the connection between and importance of personal habits and leadership, we can become more skilled and successful leaders.

Mackoff and Wenet defines the five habits of mind as:

◆ Reflection: The capacity to examine and appraise one’s own behavior and impact on others.
◆ Framework: The creation of an optimistic narrative that helps to interpret negative events in a way that encourages resilience and proper response.
◆ Attunement: The practice of setting aside assumptions, reversing roles and learning from every person in the organization.
◆ Conviction: The ability to trust, value, speak, and act from one’s own experience.
◆ Replenishment: The act of restoring perspective and renewing resources through finding and indulging in counterpoint activities that are dramatically different from one’s normal routine.

The LDI class realized that leaders in research administration do not often seek replenishment, which is an extremely important aspect of leadership. During our leadership studies, we regularly noted that a significant limitation on leadership success could be attributed to low reserves of emotional energy. Most people recognize the practical importance of patience, active listening, and looking beyond the immediate problems of the day. The difficulty comes in accomplishing these higher order tasks when we are so hurried and harried by our daily grind that we lack the mental and emotional energy to practice leadership behaviors we know are appropriate. Because we lack this reserve of positive energy, we sometimes fail to make allowances for the stress-related behavior of our colleagues, to rise above the fray in a heated meeting, or to lead calmly and efficiently under time pressure.

From a leadership standpoint, these failures are a significant issue. A leader’s goals must go beyond merely getting through the trials of the moment. Ultimately, leaders are expected to seek, create, and move their staff toward a larger vision or mission. When a leader becomes overly stressed or tired, she or he may lose the

1 This article is reprinted from NCURA Magazine, Volume XL, No. 1, February/March 2008. It is used with permission of the publisher.
motivation and ability to work toward these larger goals. Instead, the leader becomes reactive, narrowly focused, and short-sighted – precisely the opposite of what is needed. In short, the leader stops leading! When this happens, the tendency is to blame the circumstances and to lose sight of the crucially important roles that leaders play in creating long-term success. The best place to short-circuit this vicious cycle is right at the beginning by regularly replenishing inner reserves of patience, perspective, and energy so that leadership roles are more often met with vigor and enthusiasm.

**Replenishment: Inner Self**

Mackoff and Wenet recognize that replenishment is found through “counterpoint activities that are entirely separate from our jobs.” These separate activities should inspire our inner selves, whether it is in the form of regular exercise, adequate sleep, additional academic study, spiritual renewal, or fun hobbies. Leaders who replenish their inner selves regularly develop a more balanced perspective on life and a more practical sense of self. They more readily recognize what circumstances drain their energy reserves and are able to replenish themselves proactively versus reactively, thus preventing the physical abuse or negative addictions we might force on our bodies.

The counterpoint activities that we engage in can also provide additional sources of meaning and satisfaction in our lives – so that our work life does not have to bear this burden. The more areas of interest we have, the more likely we will be to see progress in at least one of the activities we engage in. Challenges and setbacks at work do not have to define all our productive efforts if we find success and meaning in other areas of our lives.

Indeed, the success we find in these other areas can give us the energy we need to confront and overcome challenges at the office.

Restoring our inner perspective and healthy sense of self increases our leadership integrity, confidence, willingness to strategize and take risks, and readiness to assume additional leadership roles and responsibilities.

**Replenishment: Interpersonal Relationships**

In addition to finding sources of replenishment within our inner selves, leaders often find restoration in their interpersonal relationships. Spending time with friends and family members, becoming involved in a church, or building a professional network outside of your primary institution can be essential counterpoint activities for leaders. In addition, inspiration can come from various role models who reassure us, foster a positive attitude in us, or provide assistance and encouragement. Our LDI class found that one of the greatest benefits of the LDI program was not only the leadership skills and knowledge gained throughout the year, but the relationships we developed with our advisors and colleagues. Leaders who recognize the importance of interpersonal relationships often deepen their communication skills, increase their mutual respect for their colleagues, and manage more capably and effectively.
Replenishment: External Giving

The final area of replenishment can be found in external giving to society, such as volunteering in an organization or becoming actively involved in your community. Volunteering in service to others is a defining characteristic of NCURA and is strongly correlated with health and happiness. Volunteering generates satisfaction and energy, which translates into more effective leadership when you return to your day job. Leaders who unselfishly give of themselves to the cause of others are more able to keep their day-to-day concerns in perspective and to work productively on higher order tasks. Such leaders find time to advance the mission of their organization, rather than simply conduct its business.

As leaders we need to take the knowledge gained from the past, use the “habits of the mind” formed from past circumstances, and continuously look honestly within ourselves to become better leaders. The field of research administration continues to become more complex, and leaders in research administration are constantly facing tough challenges and stressful situations. Success in this environment comes from innovation and adaptation by well-led teams – not by repeating the same processes more often. Our institutions cannot support the continual expansion of resources that approach would require. We need to understand that our leadership skills are crucial to the success of our teams and institutions. These roles and responsibilities must not take a back seat to short-term problem solving. It is more important than ever that leaders maintain the energy level needed to make leadership their key responsibility. We must remember the importance of replenishment!

As you begin a new year with a fresh perspective, we challenge you to make a commitment to yourself to replenish your energy sources – and you can start this process in small ways. Remember – your institution will not shut down if you walk away from your desk and take a stroll during your lunch hour!

About the Authors

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Encouraging the Heart: Being a Positive Leader during Stressful Times

Tammy J. Custer, Cornell University

With all the news regarding budget-cuts across campus, and hearing of colleagues in other departments either being let go or taking early retirement, I find that at times like these it can be challenging to consistently be a positive leader.

Change is inevitable and with the economic situation, many of us have greater challenges in our lives or know of friends, family or co-workers having troubles and more stress. Albert Einstein said “In the middle of every difficulty lies opportunity.” As leaders, how do we turn difficulties into opportunities and consistently manage the stress in our environment? In NCURA’s LDI Program, we learned that successful leadership involves encouraging the hearts of ourselves as well as others. This involves finding authentic ways to counteract negative feelings and situations that exhaust, frustrate and even make people want to give up. The good news is that several practical and inspirational approaches to managing stress and encouraging the heart are quick, easy and inexpensive to implement.

“Encouraging the heart” often happens when you read and share uplifting articles or books with colleagues. In his article, “Leadership Techniques: Five Leadership Secrets for Challenging Times,” Ed Sykes discusses five leadership techniques for difficult times: Integrity, Knowledge, Decisiveness, Vision, and Unselfishness. Acting unselfishly is important, but especially so during these times. In tighter economic times, resources, including people resources, are usually spread thin. Remind yourself that faculty, staff or others are scrambling to find reliable and timely information and help. Taking the time to listen and provide support and guidance are great ways to help reduce stress for others while promoting trust and good leadership.

In his article, “Use Stress to Your Advantage” Peter Bergman, uses the term “Stress Reaction” to describe what we do to manage ourselves through ongoing stressful periods versus a single stressful event. Stress reactions can be constructive or destructive. Bergman describes a variety of approaches one can take to maintain focus and provide a sense of control when we lack real control. Constructive approaches could include cleaning and organizing one’s environment, reading and thinking about different viewpoints in order to gain insight, eating healthy foods, getting plenty of rest, meditating, and connecting authentically with others. Common destructive stress reactions are withdrawal, competitiveness or micromanagement. As leaders, being aware of these reactions is important.

After reading Bergman’s article, I asked myself what my stress reactions generally are. Two things I commonly do to relieve the stress are: 1) I find ways to resolve the problem at hand; and 2) I go shoe shopping. I may not get the problem resolved, but I know I will always find that great pair of shoes to make me happy. Levity aside, Bergman encourages these steps:

1 This article is reprinted from NCURA Magazine, Volume XLI, No. 3, July / August 2009. It is used with permission of the publisher.
◆ Stop – Become aware of how you are handling the stress. Continuing to think of the problem can intensify the stress reaction.
◆ Take a few deep breaths to clear your mind and to become more focused.
◆ Reassess the situation – with time, or after talking with others, solutions may become apparent.

In my role in research administration, I have found many options to help deal with day-to-day process challenges and difficulties. One option might be to review office practices for possible efficiencies or improvements. Consider requesting a group effort where the team comes up with better practices. Other options might be re-assessing workload, delegating for greater efficiency, or implementing a cross-training program for those employees who want to advance or learn more.

Encouraging the heart also involves recognizing people for extra and thoughtful things they do and thanking them for jobs well done. It is amazing to see how practicing these simple courtesies can motivate and effect positive relationships. For example, when I worked at a part-time job many years ago, the company required all employees watch a video on behavior and the ripple affect either positive or negative behavior has on customer service and on relationships in the workplace. The lessons learned from that video remain with me to this day.

Other important ways to help encourage the heart and help manage stressful times include taking time to laugh and celebrate. In a book by Matt Weinstein “Managing to Have Fun”, he states, “The intentional use of fun at work can be a positive force in team building, in customer service and boosting employee morale”. Because of the busy environment we work in, we sometimes forget to stop and take a break. Recently, I shared Edward M. Hallowell’s article “Overloaded Circuits – Why Smart People Underperform” with colleagues, which gives helpful information on why at times we need to shut off the constant stimulation to our brains. This article inspired my office to have lunch sessions called “Reboot Your Mind”. Each session has a theme and participants bring a dish to share based on the theme. We reserve a conference room, and block out time to get away from our desks, have lunch together and talk about non-work related topics. Our office recently invited our Financial Services office to join these sessions, which has further increased collegiality.

No matter what your role is at your institution, just remember that you can always succeed in setting a leadership example by better managing your stress and looking for ways to implement practical ways to decrease stress in your environment. Consider the ideas discussed in this article, brainstorm with friends and colleagues, and you, too, can turn your challenges into opportunities.

About the Author
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Using Nonviolent Communication in the Research Office

Cheryl Anderson, University of Texas Southwestern Medical Center at Dallas; Carolyn Elliott-Farino, Kennesaw State University; and David Ngo, University of Wisconsin

Nonviolent Communication (NVC) is a way of communicating that can help deepen and improve relationships on a personal and a professional level. NVC is a powerful tool for developing the trust and respect that are essential for effective leadership. Clinical psychologist Marshall B. Rosenberg developed the NVC process in the 1960s, in response to his observation that humans are naturally compassionate and his lifelong contemplation of two related questions: What happens to make a person turn away from his compassionate self and become violent? Why do some people remain compassionate even under very difficult circumstances?

In chapter one of his book, Nonviolent Communication: A Language of Life, (2003) Rosenberg explains what he means by nonviolence and outlines the elements of NVC. He says that he uses the term nonviolence as Gandhi used it – “our natural state of compassion when violence has subsided from the heart.” Rosenberg was struck by the role that language plays in one’s ability to remain compassionate. We don’t think of language as being violent, but our words often hurt and bring pain to others. If we both speak and listen by giving from the heart, we enable our natural state of compassion – when violence is absent from our hearts – to take root, and we are more likely to get the results we are seeking. What does it mean to give from the heart? According to Rosenberg, “When we give from the heart, we do so out of a joy that springs forth whenever we willingly enrich another person’s life. This kind of giving benefits both the giver and the receiver.”

At the LDI closing retreat in Washington in October, the 2009 class explored the concepts of Nonviolent Communication and how NVC can be used in the context of research administration. We learned that there are six principles that frame the NVC process: (1) all human beings have the same universal needs; (2) all behavior is an attempt to meet these needs; (3) our feelings are messengers of met and unmet needs; (4) disconnections between people are tragic expressions of unmet needs; (5) we are each responsible for meeting our own needs; and (6) by focusing on our needs and differentiating these from the strategies used to meet our needs, we can better prevent, reduce, and resolve conflicts. The NVC process can be summed up using the acronym OFNR – Observation, Feeling, Needs, and Request.

Step one, Observation, refers to making a non-judgmental observation about concrete actions that are affecting our well-being. Consider the following hypothetical situation: Professor Plum is submitting a proposal in response to a federal RFP that lists a number of contract clauses to be incorporated into a contract, if awarded. The Research Administrator has reviewed the proposed clauses and realizes that some are unacceptable; she will need her legal office to help her prepare a list of

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contract exceptions for the proposal, due in two days. She has left three voicemails and sent two emails in the past week without any response. Remembering her NVC training, the Research Administrator modifies her approach. Her next message begins, “I have called you three times and sent you two emails about these contract clauses and you haven’t contacted me.” There is no evaluation of the legal office’s behavior, no judgment being rendered.

The second step in the process refers to how we are Feeling in relation to what we are observing, and that usually involves emotions: I feel happy / sad / relieved / angry / optimistic / nervous. Feelings differ from thoughts in that the latter express what we are thinking and are often introduced by “I feel like” or “I feel that.” If the Research Administrator were to say, “I feel like you are ignoring my requests,” she would be making a statement about how she thinks her legal contact is behaving. NVC practitioners stress that if we keep our emotions bottled up inside, we lose our ability to connect with ourselves and others. Consequently, the ability to express our feelings to others is an important facet of conflict resolution. In the above scenario, the Research Administrator would express her feelings by adding, “I feel nervous when I don’t receive any response from you for a week.”

Step three is the Needs, values, and desires that create our feelings; everyone has needs, and whether or not our needs are met determines how we feel. We often mistakenly believe that the actions and words of others cause us to feel the way we do, good or bad; but NVC teaches us to take responsibility for our feelings and to be aware of our needs. If we ignore our needs, they go unmet and we become uncomfortable, and then we start to lose our connection with ourselves and others. When our needs are met, we are in a better position to connect with others and give from the heart. Thus, it is important that we express our needs when we communicate with others; too often, we ignore our own needs. In our hypothetical situation, the Research Administrator would say, “I need your help in preparing the contract exceptions because they must accompany Professor Plum’s proposal that is due in two days.”

The fourth step in the NVC process is Request. Making specific requests is how we meet our needs. If the Research Administrator says, “Please contact me as soon as you can,” she may not get a response until next week and that will be too late; but the legal office may not know that. She needs to let them know that this proposal is due in two days and that she needs their help now. Otherwise, the list of exceptions will have to be sent without legal guidance, the Research Administrator will be dissatisfied, and there will continue to be conflict in this relationship. A request that conveys what she wants from the legal office would be, “Please call me this morning so that we can set up a time to meet later today or tomorrow to prepare the contract exceptions.”

Having NVC skills and using them on a daily basis can be an asset for Research Administrators because we spend most of our work day interacting with others, and these interactions require productive communication. As Research Administrators, we work with internal customers – faculty, department administrators, business office personnel, deans, as well as external customers – primarily sponsors and
collaborating institutions. Each party has its own needs and agenda, sometimes in conflict with one another; and it is left to the Research Administrator to make peace and keep everyone happy.

When we interact with faculty as Research Administrators, our needs become the needs of the institution and the sponsor (i.e. adherence to institutional and sponsor policies and procedures). On the other hand, when we interact with non-faculty institutional personnel, our needs become those of the faculty – to implement our project with a minimum of roadblocks. Finally, when we communicate with sponsors, our needs are those of the faculty and the institution; e.g., retaining intellectual property rights and having an adequate budget with some flexibility in spending. To say one needs to be nimble in these interactions is an understatement, and a magician, only a slight exaggeration.

Successful interactions with constituents are critical to Research Administrators, successfully handling their responsibilities. Leaders, in particular, need to be able to communicate effectively with internal and external customers. Adopting the four-step process of Nonviolent Communication as a tool to help manage conflict can be a productive strategy. The key is to communicate observations free from any evaluation or judgment (O); express our feelings in order to enhance our ability to connect with ourselves and others (F); state our needs and thereby take responsibility for our own feelings (N); and make specific requests about what we want (R).

For more information on Nonviolent Communication, please see:
◆ The Center for Nonviolent Communication (http://www.cnvc.org/)
◆ Bay Area Nonviolent Communication (http://www.baynvc.org/)

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Difficult People: How to Know Them, How Not to be Them

Leerin K. Shields, The Johns Hopkins University, School of Medicine, and Anita Mills, University of Pennsylvania

“What you do speaks so loud I cannot hear what you say.”

— Ralph Waldo Emerson

Let’s face it, we can all be difficult. We would constantly be on the move if we tried to run away from every difficult person. The first “difficult person” we have to deal with is ourselves, one of the first exercises taught in the NCURA Leadership Development Institute, and certainly one of the most beneficial, is that leaders must learn their own personality types before they can gain an understanding of others. In doing so, leaders learn that good communication requires working through fears and becoming aware of “blind spots” in their own behavioral patterns. Effective management of difficult interpersonal relationships requires the ability to communicate honestly within ourselves, as well as with others. When a leader begins to understand her or his own psychological drives and desires, he/she is able to avoid behavioral stumbling blocks and unknowingly encouraging difficult behavior within themselves or others. Whether you are a leader in a formally defined leadership position, or simply someone whom others seek out, you can benefit from an understanding of how your behavior influences others.

The behavioral and communication habits of leaders greatly influence the environment in which they lead. Their actions communicate their personal values and their vision for the organization. As Kouzner and Posner discuss in “The Leadership Challenge Workbook,” good leaders understand that their “voice” as a leader is closely related to their own personal values. Leaders’ actions set the tone and the expectations of the people that they lead. Because leaders are looked up to as role models, it is important for them to consider the impact of their behavior. Leaders who model negative behaviors are setting an unhealthy example and may cultivate bad behavior in others, thus creating an environment in which difficult people thrive and congenial people become difficult. If a leader is unclear about his or her personal values or he may appear chameleon-like. Chameleon-like behavior erodes a leader’s credibility and gives the impression of inconsistency and indecision, thereby undermining effective communication and the image of strong leadership. Whether or not the person is conscious of his or her negative behaviors, the result is the same. It is most important for leaders to explore their behavior and underlying psychological motivation when dealing with difficult people.

There is an old saying: “People treat you the way you allow them to treat you.” Becoming a strong leader means overcoming common blind spots such as fear of rejection and confrontation. If a leader’s behavior is centered on the avoidance of fear it will be hard for him or her to project a strong and confident voice. Good communication skills are essential for leaders who must deal with a variety of difficult

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1 This article is reprinted from NCURA Magazine, Volume XL, No. 2, April/May 2008. It is used with permission of the publisher.
people. When leaders “model the way,” as Kouzner and Posner describe, by communicating consistently with team members and colleagues, they are able to connect with people in a way that demonstrates competence, credibility, and a genuine respect for others. Additionally, leaders who demonstrate competence and respect for others are able to build a culture based on mutual trust.

It is important that leaders not only explore their inner world, but also consider a variety of techniques to deal with difficult people. Leaders will be well served if they choose to build their knowledge of different personality types and learn techniques for diffusing and dealing with difficult behavior. There is no silver bullet for dealing with difficult people, but a number of helpful books are available and worth consulting.

It is not necessary to be a psychologist to implement the suggestions in “Coping with Difficult People” by Robert Bramson, but readers will need a willingness to develop better communication skills. Bramson suggests using a coping approach that does not seek to control or demand change from a difficult person – of which Bramson identifies seven different types and outlines techniques to diffuse their behavior. Just be careful that you’re not “typecasting” a difficult person and thereby closing off communication. A key concept of the book is that difficult people use their behavior to get a desired result because they have learned it works – picture a child throwing a temper tantrum in a store and getting a cookie to calm them down. An adult’s behavior may be less dramatic, but no less damaging. The book outlines communication techniques that can be used to consistently convey the message that the difficult behavior is unacceptable.

Bell and Smith, in their book “Winning with Difficult People,” describe difficult people as Sources of Pain, which they humorously describe as “SOP’s.” The techniques and scenarios outlined in the book are based on 500 interviews with difficult people and the people their behaviors have affected. The book discusses twelve different types of difficult people and describes their behavior in detail. The book is a great source of real-world examples and specific techniques that can be used with performance appraisals, disciplinary conferences, terminations, and exit interviews.

Bell and Smith suggest that exploring our own judgmental voices will better enable us to understand our reactions to the difficult person. Effectively dealing with a difficult person requires anger management – since anger destroys communication. The book discusses techniques that can be utilized to remain objective and keep the lines of communication open. The authors argue that exploring our own inner world is the way to build our knowledge and listening skills to achieve better communication.

Reading Sam Horn’s “Tongue Fu” reminds us of a sign posted on an IRB administrator’s desk that reads, “It is nice to be important but it is important to be nice.” We are so often centered on our own feelings and accomplishments that we feel entitled to get our way. The lesson to be learned is that, despite our title, degrees, family name, or affiliations, the world does not revolve around any one individual. It is only by working cooperatively that we achieve great things. This book explores a variety of techniques that will help even the most self-centered person step outside themselves. The reader is encouraged to communicate better with a difficult
person rather than wallowing in hurt feelings or bruised egos. In Horn’s view, our own impatience is often the by-product of ignorance. Horn outlines techniques that help the reader explore situations and gather objective facts required to communicate with difficult people.

The bottom line is that good communication is critical when dealing with the behaviors of difficult people. Leaders need to understand themselves as well as the various types of situations and personalities that trigger bad behaviors. Leaders who explore their inner worlds and understand themselves first will be empowered to deal confidently with difficult people.

We hope that readers are inspired to explore their inner world as well as build their knowledge of ways to deal successfully with their own and others’ difficult behavior. Unexpectedly, difficult people can teach us things about ourselves that we would not have otherwise considered. We hope that when faced with difficult people you will confidently approach them with a willingness to grow and expand your knowledge about human behavior. No leader is an island and we hope that everyone consults the resources discussed in this article to build better communication skills so that you are able to work better with others. Ultimately, a person cannot force another to change. But by altering our own behavior, we can change the dynamic and possibly the outcome of any situation.

We would like to thank the LDI class of 2007, NCURA, and other colleagues for their support, inspiration, and willingness to provide honest feedback. Without contributions from others this article would not have been possible.

Self-Examination
Here’s a brief exercise to get you started on examining your own attitudes and behaviors.

Scenario:
Professor Frazzle is one of the top researchers at your institution. He is used to getting his way and having everyone cater to his every need. You have never warmed up to Professor Frazzle and find yourself boiling with frustration just at the sight of him.

Professor Frazzle pops in your office just as you are about to shut down your computer and head off to a long and well-deserved vacation. You are exhausted. You need to leave the office so that you can finish packing, make family arrangements, and tie up a multitude of other loose ends. Professor Frazzle insists that you are the only one who can help him. You know if you do not help Professor Frazzle you will spend your entire vacation filled with anxiety and frustration.

Mental Practice:
Do you have a Professor Frazzle in your life? Think about this person and jot down everything (We mean everything!) that comes to mind when you think of this person.
◆ What do your notes reveal about your thoughts and or judgments about your difficult person?
◆ How are these judgments affecting your communication with the difficult person?
◆ Are the judgments valid?

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Contingency Theory: An Alternative for Identifying Effective Leadership in a Constantly Changing Higher Education Landscape

Thomas J. Roberts, Florida Gulf Coast University

The field of research administration is constantly changing. Not only in terms of compliance, rules, regulations, and societal events, but in terms of institutional profiles, organizational structures, demographics and leadership.

Take into account that the professional field of research administration emerged in the late 1950’s as a result of several exploratory planning meetings by small groups of university administrators who collectively agreed it was time to look beyond business and fiscal matters and into the broader aspects of research administration (Wile, 1983). According to Wile, the first official meeting of the National Council of University Research Administrators was held on January 26, 1960 at the University of Chicago with forty-five (45) persons attending representing forty (40) institutions from across the country. A 1968 survey conducted by a research committee of the Society of Research Administrators (D’Agostino, 1968) revealed that the professional field of research administration was dominated by men to the tune of ninety-seven percent (97%), ranging in age from 30-39 years, with the majority of research administrators holding a Bachelor’s degree. Fast forward to 2015 where the professional field of research administration is comprised of eighty-five percent (85%) women, ranging in age from fifty (50) to fifty-nine (59) years of age, with the Master’s degree being the dominant educational level for the majority of research administrators (Shambrook, 2015). Not only have the demographics of the professional field of research administration changed, so have the institutions themselves.

In 1970 the Carnegie Foundation for the Advancement of Teaching established the Carnegie Commission on Education to develop a classification system of colleges and universities to support its program of research and policy analysis (Carnegie Foundation for the Advancement of Teaching, 2015). The Commission originally published data in 1973 and have updated six times since then with the latest update being in 2010. The 2010 data reflected a total of 4,633 institutions with 483 institutions being added between 2005 and 2010. Of the additional institutions, seventy-seven percent (77%) were private for-profit, nineteen percent (19%) private non-profit, and four percent (4%) public institutions. Furthermore, there was a significant rise in two year colleges (Associate’s classification) offering four (4) year degrees, rising from twenty-three percent (23%) in 2005 to forty-nine percent (49%) in 2010.

The Carnegie Foundation for the Advancement of Teaching transferred responsibility for Carnegie Classification of Institutions of Higher Education to Indiana University Bloomington’s Center for Postsecondary Research on January 1, 2015 (Carnegie Foundation for the Advancement of Teaching Newsroom, 2015). The Lumina Foundation awarded $500,000 to the Center for Postsecondary Research to update and enhance the Carnegie Classification to reflect and accommodate an evolving higher education landscape. Substantial updates and revisions are anticipated to be completed by the end of 2018. The data collected is widely used in the study of postsecondary education and represents and controls institutional differences.
Considering the demographic changes of the thousands of people employed in the field of research administration, and the ever changing landscape of postsecondary institutions themselves, it would be wise for institutions to hire leaders who are best suited for the particular situation they face. The contingency model of leadership effectiveness was originally developed by Fred Fiedler in 1967 and offers a theoretical model for identifying effective leadership. The theory hypothesizes that leadership effectiveness depends on two factors. The first is the degree to which the leadership situation gives the leader control over the group process and group performance, and the second factor is concerned specifically with if the leader’s primary concern is task performance or with interpersonal relations (Chemers & Ayman, 1993). In short, the contingency model of leadership effectiveness matches the leadership style of an individual to the situation they face in leading a group, organization, or institution.

Fiedler’s contingency model of effective leadership asserts that your natural leadership style is fixed, there is no one best style of leadership, and that a leader’s effectiveness is based on the situation they face. The effectiveness of a group or organization depends on the interaction between the group leader’s personality and the situation (Fiedler, 1967).

The leader’s personality is determined through the “Least Preferred Coworker Questionnaire,” and examines two motivational systems which include “primary” and “secondary” goals. Primary goals identify what is most important to the individual, and secondary goals are the ones individuals pursue once their primary goals are satisfied (Matteson & Ivancevich, 1996). An individual is determined to be either “relationship-oriented” or “task-oriented.” A relationship-oriented individual is primarily concerned with good inter-personal relationships and will seek out others to gain their support and admiration. An individual who is primarily concerned with esteem and admiration of superiors is considered task-oriented, sometimes at the expense of relationships with subordinates.

The aforementioned orientations are determined through “The Least Preferred Coworker Questionnaire” (Fiedler & Chemers, 1984). This questionnaire asks eighteen (18) questions having the respondent rate their least preferred co-worker on an eight (8) point scale. Fiedler (1971) indicates that as a rule anywhere between sixteen (16) and twenty-four (24) items may be used in the scale depending on the specific circumstance. Respondents are asked to think of the person with whom they work least well, the person with whom they had the most difficulty in getting a job done, and to describe the person as they appear to them by responding to the questions posed accordingly. “The description of the least preferred coworker is made on a short, bipolar eight-point scale, from sixteen (16) to twenty-two (22) item-scale of the semantic differential format” (Matteson Ivancevich, 1996). For example, the respondent is asked to view the least preferred coworker as unfriendly (1) or friendly (8), rejecting (1) or accepting (8), or disagreeable (1) or agreeable (8). Any whole numerical value between one (1) and eight (8) may be selected based on the degree to which the respondent believes the least preferred coworker fits the specified characteristic. The least preferred coworker score is the sum of the item score.
The questionnaire developed by Fiedler and Chemers (1984) includes eighteen (18) questions (or personality characteristics of the least preferred coworker as perceived by the respondent) that the respondent provides a rating for on the aforementioned eight (8) point scale. If the sum of item score is fifty-seven (57) or below, the respondent is identified as having a least preferred coworker (LPC) score as low (Low LPC). A low score suggests that the respondent is psychologically distant, or has a primary task orientation. If the sum of the item score is sixty-four (64) or above, the respondent is identified as having a high LPC score (High LPC), suggesting the respondent is psychologically close with a high human relations orientation. Should the sum of the item score fall between fifty-eight (58) and sixty-three (63) the respondent is identified as independent.

The second primary element of Fiedler’s contingency model of effective leadership pertains to the situation a leader will face within any given group, organization, or institution. Situational favorableness is conceptually defined as “the degree to which the situation itself provides the leader with potential power and influence over the group’s behavior” (Fiedler, 1971). Fiedler’s (1967) original work postulated three components of situational favorableness which include: 1) leader-member relations; 2) task-structure; and 3) position-power. All three components affect the degree to which the situation provides the leader with potential power and influence (1971). Leader-member relations is the level of trust, loyalty, and confidence the group has in you, or the degree to which employees accept the leader. This variable is rated as good or poor as specified in the matrix below (Figure 1). Task-structure assumes that it is easier to lead a group that is highly structured or has clear tasks to accomplish, rather than situations in which structure is ambiguous, requires some level of creativity, or is generally unstructured. This variable is identified in Figure 1 as structured or unstructured. The position-power variable assumes that it is easier to lead when the leader has direct formal power to reward or significantly impact subordinates through hiring, firing, promoting, and/or impacting subordinates in a significant way. In short, the leader has the power to extend reward or punishment and is represented in Figure 1 as strong or weak. One might assume that is rare for a leader to not have such formal authority, but this is not necessarily the case. For example, a chairperson of an important institution-wide research committee may not have formal authority to hire or fire, yet is still filling an important leadership position. This example could be extended further to the chairperson of a board of trustees at a university. While responsibilities are significant and extremely important, in many instances such individuals do not possess direct, formal, or broad individual power to hire or fire.

In terms of postsecondary education in the United States, and specifically pertaining to a research administrator leading an office of sponsored research, we are faced with a multitude of different situations. Postsecondary institutions are different in terms of classification, organization, mission, and even aspirations. For example, a doctoral granting institution with very high research volume is likely to have an organizational structure that is already clearly defined, as opposed to a baccalaureate college that may or may not significantly emphasize faculty members’ pursuit of external research funding opportunities. It all depends on the specific situation
for any given institution, of which there are many.

Utilizing Fiedler’s contingency model for identifying effective leaders in the field of research administration may be worth serious consideration. To provide specific examples of the theory in practice, consider the example of a doctoral granting institution with very high research volume. In such a situation the task-structure variable will likely be considered structured due to a comprehensive infrastructure with well-defined tasks already in place. Assume further that a trusted and much loved director of sponsored research is retiring after thirty (30) years of service to the institution. In this situation, leader-member relations for a newly hired director are likely to be poor since subordinates would probably view the new director with a sense of angst and trepidation. The position-power variable, as it pertains to situational favorableness, is likely to be strong since the new director will presumably have the same power as the previous director in terms of extending reward or punishment to subordinates. In this example, and in line with Fiedler’s contingency model, the most effective leader should have a high LPC score focusing on building relationships (Figure 4120.24-1).

Conversely, consider the example of a baccalaureate institution with very little sponsored research activity. Assume the institution has a desire to place greater emphasis on sponsored research, invest in it, and move up institutional rankings in terms of research volume. In this scenario, the task-structure variable would be considered unstructured due to the fact that a comprehensive infrastructure in support of research would need to be established utilizing creativity and flexibility. The institution decides to appoint a well-liked, trusted, and highly respected individual from within the institution to lead the effort. In such a situation, leader-member relations would more than likely be good since the leader is well-liked, trusted, and respected. Finally, assume the incumbent of this new position would have power to hire, fire, promote, and reward or punish. In such an instance, the position-power would be strong. In this example, the most effective leader should have a low LPC score focusing on the tasks at hand and being psychologically distant.

**Figure 4120.29-1: Matrix for Identifying the most Effective Leadership Style for the Situation**

<table>
<thead>
<tr>
<th>Leader-Member Relations</th>
<th>Task Structure</th>
<th>Position-Power</th>
<th>Most Effective Leader</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>Structured</td>
<td>Strong</td>
<td>Low LPC</td>
</tr>
<tr>
<td>Good</td>
<td>Structured</td>
<td>Weak</td>
<td>Low LPC</td>
</tr>
<tr>
<td>Good</td>
<td>Unstructured</td>
<td>Strong</td>
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<tr>
<td>Good</td>
<td>Unstructured</td>
<td>Weak</td>
<td>High LPC</td>
</tr>
<tr>
<td>Poor</td>
<td>Structured</td>
<td>Strong</td>
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<tr>
<td>Poor</td>
<td>Unstructured</td>
<td>Weak</td>
<td>Low LPC</td>
</tr>
</tbody>
</table>

*Adapted from “The LPC Questionnaire,” in Fiedler & Chemers (1984)*

Scenarios are presented above that reflect the most effective leadership style for both high and low LPC leaders. Fiedler’s contingency model asserts that there is no
one best style of leadership, rather a leader’s effectiveness is based on the situation (Fiedler, 1964). Therefore, it neither good nor bad to score high or low on the LPC scale. The scale simply defines an individual’s natural leadership style and predicts the most effective leadership style for a given situation based on leader-member relations, task structure, and position-power. Effectiveness of a leader is determined by the degree of match between a dominant trait of the leader and the favorableness of the situation for the leader.

Most postsecondary institutions face a unique set of circumstances as it pertains to research and sponsored programs. Some institutions set goals to be ranked in the top twenty in terms of research and development expenditures, while others simply have a desire to place a greater emphasis on research and sponsored programs. Other institutions have a primary focus on teaching and pay little attention to rankings or prestige as it pertains to research and sponsored programs. Additional complexities for the research administrator are anticipated due to the changing landscape of postsecondary education. The increase of associate colleges offering baccalaureate degrees and dabbling with placing an emphasis on research and sponsored programs will create challenges for the institutions themselves, while at the same time creating opportunities for research administrators to build research infrastructures from scratch. Different types of leaders are necessary for different situations and circumstances. Knowing an institution in terms of classification, organizational structure, and aspirations is vitally important for any research administrator. Regardless of the particular situation, one needs to be prepared and aware of expectations and challenges they may face. Fiedler’s contingency model may be able to assist with the identification of the most effective leader for a given situation.

References


About the Author

Dr. Thomas J. Roberts is the founding Chief Research Officer (CRO) and authorized institutional representative at Florida Gulf Coast University (FGCU). He established the office of research and sponsored programs and led the development of a complete and comprehensive research infrastructure. He served in this capacity for fourteen (14) years and until July 2012. Currently, he is an Associate Professor of Educational Leadership in FGCU’s College of Education. Dr. Roberts has twenty-eight (28) years of experience in higher education and has served various types of institutions including comprehensive, doctoral granting, medical school, and major research university environments. He authored the first doctoral dissertation focusing specifically on the field of research administration, published numerous peer reviewed manuscripts, and has given dozens of conference and other invited presentations.
Achieving Leadership by Moving “YOU” Out of the Way: A Personal Journey into Leadership Discovery

Derick Jones, Los Angeles Biomedical Research Institute at Harbor-UCLA Medical Center

Taking the leadership journey is one of the most life-changing experiences for the research administrator. It is that moment in your professional matriculation that you move from being “one of the team” into becoming a critical player within your organization. That journey into leadership can be a powerful experience for those who are birthing the leader within. It is the full cycle of professional evolution that will transform you from the caterpillar into the beautiful butterfly. This process will ultimately dictate the trajectory of the rest of your professional career. It is the ultimate journey of self-awareness that will also impact every aspect of your life on a go-forward basis. Many struggle with this evolutionary progress because they are stifled by the negative energy that has blocked their ability to morph into the leader within.

What defines the “YOU”

In order to reach your highest level of leadership discovery, you will have to do more than just master the proficiency of task oriented job duties. It will ultimately require you to do some self-discover and realization to understand how you are ultimately wired for leadership and success. All of us have had life experiences that have defined us as individuals. Some of them were great experiences and others were not. Whether good or bad, every experience is coded into the DNA of your existence and ultimately defines who you are as a person. Part of your leadership discovery is learning how to understand what defines you as the person you are. Discovering your leadership makeup is essential to your ultimate success.

Self-Awareness

Defining the YOU will always start with self-awareness. This is the process of your journey to leadership discovery where you will dissect the experiences that have defined you as an individual. Was it when you were in 3rd grade and had to recite a poem in front of the class and you froze? Was it the first time you asked someone out on a date and were rejected? Was it the time when you tried your hardest to win at something but failed? Where you the last person picked for dodge ball? Take the time to think about it. All of these experiences became part of the fabric of you. According to Maaher Sayeed, “We all are shaped by our experiences in our lives. And the memories, good and bad have permanently altered our outlook towards our lives and future. We are nothing but a mind over matter that is a product of our experiences under specific circumstances in our lives. If our circumstances were any different our experiences would have been very different as well and would result in a different memory that will remain with us forever.”

Owning Your Experiences

Take ownership of your life experiences. They are what makes you who you are as a person. Learn to navigate through the complex maze called you. If you see a path
that is a dead end, pull out your leadership tools and change your course. You own your experiences. One must develop the ability to learn from them. You have to choose the path that will benefit you versus going through life blindly controlled by past experiences. A successful leader will master their inner being to always see the bigger picture. Is it a simple process? Honestly, no. For some, this is a life’s journey, for others, it may be a shorter process. Ultimately, work and time must be allocated for the process for ultimate success. Taking ownership could have you go through some gray moments of self-affirmation. Just stay focused to the end result.

**Honesty**

My Grandmother would always say, “Tell the truth to yourself, even if the truth hurts.” I always chalked it up to just another of one of her many sayings but while I was going through my own leadership journey, these very words came back and resonated within. Being honest about who I was, my frailties as a human, conducting my own strengths and weaknesses analysis, lead me to the new discovery that there will always be areas of growth that must accompany my leadership journey. I had to be honest about my likes and dislikes, limitations and social behaviors. As the workplace has changed into a multi-generational and multi-cultural melting pot, the aha moment was that not everyone sees life and situations the same. What defined me will not be what defines another. The acceptance of one’s leadership DNA will allow you the ability to acknowledge your limitations in order to understand someone else’s.

**Trust**

Life experiences and events can sometimes make it difficult for a developing leader to trust themselves through the process of self-discovery. It’s part of our human DNA to question the process as a result of situations. Am I making the right decision? Do I have the right qualifications to make this choice? What if I make the wrong choice? It’s life’s funny irony that it is filled with so many choices. In every aspect of our lives, we make choices. What do I have for breakfast? What should I wear today? All choices. Making choices is ultimately like standing at a crossroads. You have to decide which path will lead you to ultimate success. Trusting one’s instincts as a leader is a pivotal inclusion to leadership discovery. As a leader, you will be constantly faced with making decisions that have impact on yourself and others. Your choices cannot be based on fear but on trusting your learned instincts gained from past experiences. You’re wiser than you give yourself credit. Tap into your experiences and use wise counsel of others. Trust your instincts and own them.

**Empathize**

In a multi-generational and multi-cultural workplace; leaders must remain empathetic toward the life experiences that define the modern workforce. A leader must be accepting and understanding of cultural and generational diversity. Learn to maximize the varying diversity to aide in the success of your office versus it being dividing factor. It starts with YOU. As the leader, model the way and set the climate of collaboration for your workplace. Do not allow your own experiences, or the lack their of, to...
negatively affect your leadership. A compassionate leader is a desired leader.

*Inspire*

In the modern era, one who is considered charismatic can be looked at either positively or negatively. Regardless of the perception, people are attracted and drawn to inspirational and charismatic individuals. A popular game as a child was follow the leader. Some children where naturally selected. Some reluctantly selected and some never selected. I’d like to believe that wherever you ranked in the selection process, your leadership potential remained intact. Some got to exercise it at an early age while others may be late to blossom into leadership awareness. The question I pondered for years was why was I often selected to be the leader? What was it about me that made others naturally look up to me for leadership? This unknown characteristic that was seen by others remained a mystery to me for most of my early adult years. It was somewhere hidden in the self-doubt birthed by life’s events that defined me as an individual. My leadership journey opened my perception to embrace the fact that I had a natural ability to connect with others and to inspire them. My leadership gift was the ability to encourage others to reach their fullest potential. A leader inspires others to greatness while a manager oversees task. It wasn’t until I started my leadership journey that I realized that there are gifts that every leader must humbly accept in order to reach their leadership potential. Some are inspirational, some are visionaries, some are even motivational. Whatever your gift is for leadership, embrace it because it will ultimately define you.

Your personnel journey into leadership may take many twist and turns. At times it may be uncomfortable and may ultimately force you to step out of your comfort zone. Leadership is not easy. If it were, everyone would be the leader. It is ultimately obtained by those who are willing to do the work to overcome self and aspire to the greater good, be it humanity or the workplace. Some have obtained this through adversity like Dr. Martin Luther King, Jr. and Mahatma Gandhi. Some became leaders by circumstance such as Rosa Parks. Some aspired to leadership like President Obama. However you get to your leadership potential, the commonality is that they all transcended “You” and evolved into “We.”

**References:**


**About the Author**

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Tools for Assessing Your Leadership Skills
Michelle Schoenecker, University of Wisconsin-Milwaukee

Making the decision whether to pursue a leadership role in an organization is often fraught with concerns: Am I up for the task? Will I be a good leader? What are my strengths as a leader and how can I maximize them? What are my weaknesses and how can I improve them? While these are natural concerns, navigating a leadership role without first understanding who you are, the abilities you possess, and the values that are important to you in leading and working with others is like exploring the Himalayas without a compass and a map: you don’t have the tools you need to guide your way and avoid the pitfalls. This is especially important in research administration, where the diversity of our work requires leaders who can work with a broad range of personalities and skill sets. To help understand yourself better, the use of a leadership inventory can be an excellent first step, as it can provide you with valuable insight into who you are and how to start your leadership journey.

The purpose of leadership inventories is to determine your personal values, working style, behaviors, and personality traits, and categorize them in ways that will help you understand how you can lead and work with others most effectively. There are many leadership inventories available, ranging considerably in detail, length, and price. While some inventories are simple and provide an informal assessment and others are much more complex, they share common goals: to help you see yourself and how others see you, and to determine actions that you can take to improve or modify your behaviors to be an effective leader.

This article describes two well-known, reliable inventories that provide basic and in-depth assessments: the Leadership Practices Inventory® and the DiSC® Profile. My experience with these inventories is based on my participation in NCURA’s Executive Leadership Program, in which my classmates and I and completed these inventories to identify our personality types and working preferences in order to better gauge our current strengths and weaknesses. Both inventories provided a different perspective of my personality and work preferences, and both were greatly valuable—it was fascinating and exciting to see myself from different angles, and I felt that I had the compass I needed to help navigate my future as a leader in research administration.

Leadership Practices Inventory®
Developed by James M. Kouzes and Barry Z. Posner, the Leadership Practices Inventory (LPI) seeks to measure the frequency of your leadership behaviors in the following five key indicators of effective leaders:1,2

◆ Model the Way: Leaders establish principles concerning the way people (e.g., constituents, peers, colleagues) should be treated and the way goals should be pursued. Examples of questions in this section of the inventory include “I follow through on the promises and commitments I make” and “I build consensus around a common set of values for running our organization.”

◆ Inspire a Shared Vision: Leaders believe that they can make a difference,
envision the future, and create an ideal image of what the organization can become. Questions in this section include “I describe a compelling image of what our future could be like” and “I appeal to others to share an exciting dream of the future.”

◆ Challenge the Process: Leaders look for innovative ways to improve the organization, experimenting and taking risks. Questions in this section include “I experiment and take risks, even when there is a chance for failure” and “I seek out challenging opportunities that test my own skills and abilities.”

◆ Enable Others to Act: Leaders foster collaboration and mutual respect, making team members feel empowered and capable. Questions in this section include “I treat others with dignity and respect” and “I actively listen to different points of view.”

◆ Encourage the Heart: Leaders recognize contributions that individuals make, sharing in the rewards of their efforts. Questions in this section include “I praise people for a job well done” and I find ways to celebrate accomplishments.”

Taking the LPI
The LPI is available in basic and complex assessments. The most basic, the LPI Self-Test® ($20, John Wiley & Sons, Inc.) provides a simple assessment of your behaviors. The Self-Test is a paper assessment that has 30 statements, which are divided equally into the five key indicators described above. After reading each statement, you indicate your response by answering the question “How frequently do I engage in the behavior described” using 10-point Likert scale: (1) Almost never do what is described in the statement; (2) Rarely; (3) Seldom; (4) Once in a while; (5) Occasionally; (6) Sometimes; (7) Fairly Often; (8) Usually; (9) Very Frequently; and, (10) Almost always do what is described in the statement.

Self-Test Scoring
To obtain the results of your Self-Test inventory, the score sheet identifies which questions correlate with each key indicator. Enter your self-score for each question in a key indicator and add up each section (you will have five separate scores, one for each key indicator). The key indicator with the highest score indicates which leadership actions and behaviors you exhibit most prominently; the key indicator with the lowest score indicates those you exhibit least prominently, providing you with a clearer picture of your leadership strengths and challenge areas. Because this is a basic self-administered test, the Self-Test does not provide advice for strengthening your skills or for working with people who exhibit behaviors more strongly in other key indicators. It also does not provide insight on how others may see you and how they can best work with you.

What I Learned from the Self-Test
The results of my Self-Test revealed that I scored highest in the “Enable to Act” indicator and lowest in “Inspire a Shared Vision.” While I was not surprised with
my highest score, I was puzzled about my lowest score. I certainly want people I work with to feel that I inspire and motivate them to achieve a vision of success, so why wasn’t that reflected in my score? I realized it was because I haven’t yet had the opportunity to develop a vision for an organization and be responsible for sharing it and inspiring a team. Thus, the Self-Test helped me to realize that when such an opportunity arises, I will be much more aware of the importance of this skill, and I will take the steps necessary towards achieving it.

DiSC® Profile

For a more in-depth assessment of your leadership behaviors, the DiSC Profile aims to measure the tendencies and priorities that shape your “behavior style.” Based on the work of psychologist William Moulton Marston, DiSC identifies four basic working styles, each with its own priorities, motivations, fears, and limitations.

◆ **D = Dominance:** Direct, results-oriented, firm, strong-willed, forceful. Key priorities for people in this category are challenge, action, and results.

◆ **i = Influence:** Outgoing, enthusiastic, optimistic, high-spirited, lively. Key priorities are action, enthusiasm, and collaboration.

◆ **S= Steadiness:** Even-tempered, accommodating, methodical, patient, humble, tactful. Key priorities are stability, collaboration, and support.

◆ **C = Conscientiousness:** Analytical, reserved, precise, private, deliberative, systematic. Key priorities are accuracy, stability, and challenging assumptions.

Like the LPI, there are several different types of DiSC Profiles at various prices. In my Executive Leadership Program we completed the **Everything DiSC® Workplace Profile** ($59.25, Personality Profile Solutions, LLC), which focuses on “team building, employee communication, conflict management, motivation, productivity, and career development,” all of which are necessary for effective leadership. Unlike the LPI Self-Test, the DiSC Workplace Profile is quite complex in terms of its development, scoring, and results; therefore, a high-level summary is provided.

**Taking the DiSC Workplace Profile**

The DiSC Profile is conducted online and takes about 20 minutes to respond to a wide range of statements based on the four categories above, such as “People think of me as a really good listener,” “I can be pretty forceful with my opinions,” and “I love meeting new people.” To respond to the statements, answer each with the response that best corresponds with your opinion: “Strongly Disagree,” “Disagree,” “Neutral,” “Agree,” or “Strongly Disagree.” Results are available online upon completion of the assessment.

**Scoring**

Based on your responses to the statements, DiSC Workplace synthesizes and summarizes your “unique behavioral style, your tendencies, needs, preferred environment and strategies for effective behavior.” The result is a comprehensive 20-page report that identifies your primary DiSC style (Dominance, Influence, Conscien-
tiousness, or Steadiness) and describes your preferred work style and environment. The report identifies aspects of your work that are motivating as well as stressful, and identifies the priorities that shape your workplace experience. The report also shows nuances in your style that overlap with other DiSC styles. For example, your primary style is Steadiness (S), but you also exhibit behaviors consistent with the Influence (i) style, and thus you are identified as having an Si style. The report describes the work preferences for people who are Si and how to best work effectively with them, and it also provides this information for all of the combinations of DiSC styles.

A particularly interesting feature of the DiSC Workplace report is the discussion of each DiSC style and how your style can best work with each of them. For example, if you primary DiSC Style is Influence (i), the report identifies the ways in which you can best work with someone who exhibits primarily Dominance (D) behaviors. The report discusses the motivations for D (results, action, challenge), how you as an i may perceive those behaviors, and strategies for adapting, or “flexing” to the D style. It also gives advice on how to connect with people in each different style, when to solve problems, and how to respond when tensions begin to arise. Lastly, the report provides three key strategies for working more effectively with everyone in your workplace.

What I Learned from the DiSC Workplace
The depth of information provided in the report was surprising, and, to me, surprisingly accurate. I was identified as having an S (Steadiness) style, which prioritizes giving support, maintaining stability, and valuing collaborations, and is motivated by cooperation and opportunities to help. I agreed with these statements, along with some of the more stressful aspects of being an S, such as a dislike for making forced decisions and dealing with argumentative people. The report was well organized, and the colorful graphs made the information easy to interpret. I also like the tone of the report: professional, factual, and non-judgmental. Each style was represented equally and resulted in a balanced presentation.

While the report provided a great deal of information about how I as an S see the world and my working environment, most valuable to me were the discussions on the traits of each of the other styles and how S people can best work with them. For example, S people are reflective thinkers and do not like to make decisions quickly; however, D people thrive on rapid progress and find cautious and predictable environments tedious. Thus, to best work with D people, I need to provide my ideas and opinions early in a conversation and remember that they appreciate a direct approach. It was very eye-opening for me to learn what makes each DiSC style tick and how to work with their strengths and weaknesses. By understanding what values and priorities each style holds compared with my own, I’m much more confident about my abilities to work with and lead people who have work styles very different from mine. Furthermore, I was surprised to gain so much useful information with practical recommendations for improving my effectiveness and overcoming my challenges.
Conclusion
Leadership inventories are excellent tools for gauging your effectiveness as a leader by identifying the behaviors, values, and priorities in our workplaces and in working successfully with others. Depending on their type and complexity, leadership inventories can help reveal the gaps in our understanding of ourselves and others who are very different from us, and provide strategies for bridging those gaps. While it can be difficult to confront our limitations and weaknesses, knowing ourselves better is often the first step to becoming a confident, competent, and effective leader.

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Discovering The Leader in YOU

Diane Ross Nelson, Drew University; N. Elaine Moya, Loma Linda University; Nannette Pettis, Kaiser Permanente Southern California; and Sandra Purves, Los Angeles Biomedical Research Institute

Lead Me Mentorship Program: Discovering the Leader in You

How we are formed into a leader is a journey we can initiate at any point in our careers. “Lead Me” is a NCURA Region VI/ VII based professional development program that affords Region VI and Region VII members a constructive environment to explore your inner leader. The program welcomes all types of research administrators, from directors to grant administrators, from a few years of experience to advanced. Lead Me aligns interests between a mentee and a mentor to guide professionals towards their specific aims and goals. Applications are accepted every Spring and the cohort is kept small to enhance success in the program. The program was conceptualized and founded by Linda Patton. Since its maiden launch in 2010, Lead Me has graduated 41 mentees from the program. The benefits are vast and plentiful, but don’t just take our word for it. Here is what participants had to say about their experience:

Why did you join the program and what did you find encouraging about it?

I joined the program because I saw it as an opportunity for professional development and I had a desire to improve the communication processes in our department.

– Irina Cozianu, Assistant Manager, Training & Compliance, Cedars-Sinai Medical Center

I was at a point in my life where I felt I needed a different perspective on where I was and where I would like to be short and long-term as a leader in research administration.

– Felicia Mayes, Research Manager, Neurosciences, Cedars-Sinai Medical Center

I joined in 2011 and my reasons were two-fold – 1) participation in an educational leadership to provide opportunity for personal professional growth, 2) mentoring

– Stacy Miller, Sr. Grant and Contract Officer, Cedars-Sinai Medical Center

What caused that self-discovery (aha) moment and what have you done or will you do about it?

My aha moment came when I connected a situation I had experienced personally that had also been experienced from someone in the group.

– Rashonda Harris, Associate Director, Emory University

Finding my cheese was an excellent allegory for some of my past experiences and truly being able to put all of that learning into perspective. I learned that I am responsible for framing my career and working toward the successes I desire.

1 This article is reprinted from NCURA Magazine, Volume XLVIII, No. 1, Jan/Feb 2016. It is used with permission of the publisher.
– Theresa Caban, Sr. Contracts & Grants Administrator, Kaiser Foundation Hospital
Who moved my cheese gave me a very clear insight to myself and the way I conduct my home life and work. Due to this self-awareness I strive more to have a balance in each since I found that I was the opposite for each segment of my life.
– Erika Blossom, Research Grants & Compliance Officer, California State University, Fullerton

Some of the program aspects challenge you, how did you handle this?
The program challenged me to think outside of my comfort zone. I still think to this day that they didn’t realize they awakened a roaring lion within. My confidence in my skills was realized. The Lead Me program, through our leadership project, challenged me to trust in my instincts for the industry. I conquered my fear of public speaking which boosted my confidence level tremendously as an ultimate result.
– Derick Jones, Program Manager, LA BioMed

I found it to be challenging when I changed positions mid-way through the program. However the support of the program leader allowed me to continue along to the end.
– Rashonda Harris, Associate Director, Emory University

What are the benefits of going through this program?
The benefits of the program are seeing early career research administrators grow within their institution and grow within NCURA.
– Rosemary Madnick, Executive Director, Office of Grants & Contracts Administration and Mentor/Dean of the Lead Me Program

The networking growth is phenomenal. Learning outside of just getting my job done as well was a very enlightening experience.
– Erika Blossom, Research Grants & Compliance Officer, California State University, Fullerton

The program acts as both a mirror and window – much of the studying requires one to reflect on self and past/current behaviors while you have engage with the mentors (window) and see where you can be with the proper attitude and skills. Even as a mentor, I felt the impact of the mirror and window. The program works for everyone!
– Theresa Caban, Sr. Contracts & Grants Administrator, Kaiser Foundation Hospital

What would you tell someone contemplating about applying?
Take a leap of faith and jump into the program with your mind open to a journey toward self-discovery. If you have an experience even as close to mine, you will develop more confidence as a leader.
– Felicia Mayes, Research Manager, Neurosciences, Cedars-Sinai Medical Center
Just do it! It is the best investment that you could make for your career.
– Derick Jones, Program Manager, LA BioMed
DO IT! The Lead Me program can change your professional life if you let it.
– Theresa Caban, Sr. Contracts & Grants Administrator, Kaiser Foundation Hospital

The program has changed since its initiation. Do you think it’s still relevant and beneficial today?
Absolutely! Just like the field of research administration has changed, so must the program in order to be relevant and beneficial.
– Rosemary Madnick, Executive Director, Office of Grants & Contracts Administration and Mentor/Dean of the Lead Me Program

Absolutely. I had the privilege to attend the Lead Me presentations at the NCU-RA Regional meeting in Salt Lake. In my opinion the program has grown and it is even more relevant and beneficial...
– Teeny Ellis, Sr. Contract & Grant Officer, University of California Riverside

Yes, the program has changed and reflects more of its leadership each year. It is still a viable program for motivated, thoughtful and interested participants.
– Stacy Miller, Sr. Grant and Contract Officer, Cedars-Sinai Medical Center

How has this program enhanced your career?
It’s made me a more thoughtful leader and manager for my staff and my institution.
– Nancy Lewis, Director of Sponsored Projects, University of California Irvine

The program enhanced my career by helping me find more personal satisfaction in my work and the work of others. It increased my opportunity for advancement as evident by my promotion to research manager overseeing three departments and it showed me how to serve as a role model to others.
– Felicia Mayes, Research Manager, Neurosciences, Cedars-Sinai Medical Center

My career improved tremendously within my organization and beyond. I went from being a post award accountant to managing a research institute doing cutting edge whole genome sequencing. In addition, I am now serving as chair for Region VI for 2016. It was the volunteer spirit that was instilled into me that allowed me the ability to grow within the organization. I encourage everyone to take full advantage of volunteer experiences, even if you cannot attend conferences. You have a part to play in making not only the Lead Me program success but the organization as a whole.
– Derick Jones, Program Manager, LA BioMed

This program is a great stepping stone for those wanting to discover more about themselves or the next step in their career. It allows for open discussion on your active career goals and may enlighten you on leadership strategies. Lead Me is chicken soup for the career soul. Join us on the leadership journey. To learn more about the Lead Me Program check out http://www.ogrd.wsu.edu/r6ncura/leadme.aspx or contact us directly.

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Staff Development and Creativity
Felicity Snyder, Arizona State University

Introduction
Working in research can be exciting. The research team, including administrators, support innovation, discovery, and exploration in diverse fields crossing boundaries of health, the environment, education, justice, technology, and the arts: everything from the depths of space to tiny atomic bits. In addition, research administration is a field ripe with growth potential and opportunities both in the private and public sectors.

While exciting and fulfilling, research administration also involves a lot of responsibility. “At any given time [grant administrators are] the recipient, the interpreter, the translator and the deliverer of information, documentation, requests, questions and answers pertaining to the conduct of research project[s]” (Marshall 8). Grant administration can be stressful: factors such as poor leadership, lack of support from an organization or investigators, and the ambiguity of the work can leave folks feeling burned out (Marshall 8).

Because of our demanding work, we need strategies and solutions for motivating and retaining staff that can engage in complex work while achieving set goals. This article addresses some strategies for creatively engaging and motivating staff.

Hicks and Monroy-Paz have pointed out that as research administration becomes more intense, it is more important than ever to have engaged and productive employees (78).” One engagement strategy is to nurture and encourage creativity and discovery. Barbara Dyer specifically argues, “promoting a culture of creativity requires honing the skills of observation and invention – generally the purview of artists and designers – throughout your organization and aligning core systems to reinforce the creative process” (Fortune).

Defining Creativity: Value for Work
“Creativity involves breaking out of established patterns in order to look at things in a different way.”

– Edward Do Bono

Creativity is looking at things in new ways by connecting the potentially unexpected to form new ideas and concepts that can be applied to our work to achieve the outcomes we want. Or as Steve Jobs said even more simply: “Creativity is just connecting things.”

Although we work with thousands of regulations in research administration, there exist gray areas where we are called on to interpret and consult with others: researchers, sponsors, and team members. These potentially stressful situations can be opportunities for creative intervention. In fact, a study commissioned by Adobe on how encouraging creativity paid off in “creative dividends,” found “that companies that embrace creativity outperform peers and competitors on key business performance indicators, including revenue growth, market share, and talent acquisition. They enjoy a high performance working environment, driven by progressive
leaders and managers…” (Adobe Report, August 2014).

Even with these positive benefits, it can be hard to unleash creativity in the workplace. Brian Clark of Copyblogger.com says a major block is “denying your own creativity [which] is like denying you’re a human being.” He goes on to say, “We’re all limitlessly creative, but only to the extent we realize that we create our own limits with the way we think.” Other blocks include fear of judgment from peers, fear of failure, self-doubt, groupthink, and indifference (@ValaAfshar, Sept. 28, 2015, Twitter), poor leadership, being overworked, and not feeling part of the mission of the organization. But, the biggest creativity killer may be role mismatch, because “when people are assigned to tasks/jobs/roles/creative projects that they have no interest in or passion for their creativity takes a hit.”

**Being Prepared: It Starts with You**

The number one thing you must be ready for is to change yourself and commit to making the change. Nothing will be received more poorly than an individual prescribing how others should work when they themselves do not engage in the same practice. The same goes for a manager/leader who says they embrace new work styles, but rewards the status quo. Being prepared means reading relevant books and journal articles, going to training, watching videos, brainstorming, networking with others, journaling, and other exercises.

Getting prepared also may mean taking inventory, and using—as Dyer says—the tools of observation to “learn how to look at situations from multiple angles, removing blinders and opening possibilities” (Dyer, Fortune). Take time to listen and watch what is happening in your workplace. Invite individuals out for coffee to get their take and talk with and observe other teams.

Be thoughtful, and determine what will be of value to you, to your teammates, and to your workplace. Creative change may start small: taking more breaks, coloring at your desk, or asking other team members to join you in putting together a puzzle at lunch. Small actions done consistently can have profound impact. Or, it may start big: re-evaluating team members’ roles, thinking about how responsibilities can be aligned with the things that bring team members satisfaction. Either way, you should check in with your supervisor and possibly your HR team before implementing any change.

Finally, be sure you are ready for this undertaking and that you are flexible. As you begin to implement creative change, recognize that something that worked for you as an individual may not be right for everyone on your team. Also be certain to provide an environment where folks can be authentic, take risks without feeling judged, and feel comfortable providing feedback. But also remember that change is hard, even positive change. There are going to be nay-sayers. You’ll need to have the honesty and willingness to sort through and search out real and valuable feedback that is based on something other than general resistance to new ways of working.
Creating a Safe Space

“If you think colorful furniture and a casual dress-code constitutes as ‘creative’ — think again.”

— Barbara Dyer

What does it mean to create a safe space? It means making the environment ripe for an individual to express themselves authentically, without fear of judgment or other repercussions. It means creating an environment where you do not give lip service to authenticity, honesty, new ideas, and being different. It does not mean adding a Ping-Pong table or having pizza delivered on Fridays. Those things can be a nice part of a holistic plan to improve the work environment, but they’re not enough on their own.

Creating a safe space is about encouraging folks to actually express their curiosity, their ideas, to be themselves, to buy in to what is going on, and to feel that their contributions make a difference. The result will be team members who experience personal satisfaction and fulfillment and an organization that is more innovative and is better able to retain employees.

“People are not afraid of failure, they are afraid of blame. To cultivate an innovative culture, anticipate failures and minimize blame.”

— @ValaAfshar

So what has the culture of your organization been and where should it go? How do you encourage a creative workplace while making it a safe space? Start by asking some of the following questions of yourself and of your team:

◆ What problems are we trying to solve?
◆ What is missing?
◆ What do we want more of?
◆ What does an ideal day at work feel, look, taste, and sound like?
◆ What helps you think more creatively?
◆ What do you like to do as an individual? As a group?
◆ What does okay failure look like?
◆ What does allowing for failure do to productivity?
◆ Are you okay with failure?
◆ What cannot fail?
◆ What does it mean to have a good day?
◆ What does it feel like when you have a bad day?
◆ What does creativity mean to you?
◆ Are you open to new roles/different job responsibilities?

In addition, since “the most successful managers will be those who take the time to understand their individual employee’s expectations and strive to create
appropriate cultural and policy shifts” (Hicks, Monroy-Paz 92), it’s important to ask yourself and each member of your team the following:
◆ “What makes you feel at the end of a day like you made a difference? Why?
◆ What relationships in your work give you the greatest sense of meaning and energy? Why?
◆ What makes you feel at the end of a day that you grew as a person and professional? Why?” (Hurst, LinkedIn 2015)

**Fostering Creativity at Work**

“Creativity thrives with leadership support. Regardless of type of business or industry, survey results found that executives and business leaders should nurture, fund, and promote programs to increase creative capability”

— Adobe Systems, Inc.

Creativity is innate, but sometimes it needs to be “re-learned” or opened back up. Tools and instruction, plus dedicated time can help us tap into our innate creative selves. In a Business Insider article, Patrick Maggatti of Villanova School of Business lists four things that are essential to fostering creativity at work. He said all workers should:
◆ Seek to have new experiences and expose themselves to new ideas and differing perspectives.
◆ Challenge themselves/their team by putting aside time to set and work on goals that foster new ideas.
◆ Develop relationships with people that are different than them, building a diverse network.
◆ Develop and encourage a workplace where the culture is one that “respects effort and failure.” (Maggatti, Business Insider)

Some other things that can foster creative thinking in the workplace include:
◆ Encouraging exploration and curiosity.
◆ Recognizing that team interaction, fun, and play are not superfluous or silly.
◆ Smiling more and encouraging mindfulness practices.
◆ Listening and observing.
◆ Recognizing that the physical environment – light, color – can help to stimulate creative thinking.
◆ Ensuring the right folks are in the jobs or doing the tasks that are right for them.

**Writing a Mission Statement: Setting Intention and Defining Meaning and Purpose**

Before you begin fostering creativity at work, it is important that you have a mission statement to guide your activities and for your team to rally around. A mission statement is a brief description of what you or your team want to accomplish and
why. We cannot do the work that matters to us and liberate our minds and bodies to enjoy and engage in that work (i.e., use our creativity and ingenuity) if we don’t know what motivates us, what our purpose/calling is, and where we want to go. Writing both a personal-professional mission statement as well as a mission statement for your unit can help to set you on a determined path.

“In the book First Things First, Steven Covey says that mission statements are often not taken seriously in organizations because they are developed by top executives and there’s no buy-in at the lower levels” (Hansen, Live Career Blog). For this reason, be sure to give your team an opportunity to help draft the mission statement. If you do this, the mission statement can become something the whole team can rally around.

A mission statement done correctly will provide you and your team guidance and make everyone feel that they are on part of a team that is doing something meaningful and important. It will define not only your goals, but also your values. Once the statement is written and agreed upon, everyone should have a copy and it should be revisited at least yearly or anytime programmatic planning occurs.

Avoiding Things that De-Motivate and Sabotage Your Efforts

There are a number of things that can sabotage your creative efforts including: lack of communication, consistency, or empathy, and too much change too soon.

Communication, feedback, and recognition are key to motivating your team in their creative efforts. Teresa Amabile says that praise and positive feedback are especially important for creative people, who “thrive on having their ideas impact the lives of others” (qtd. In Ciotti, Business Insider). A leader fails when they do not let folks in their organization know what is going on. When people do not understand what is going on, they feel distant from the organization’s mission, and do not see how they fit in. Having employees “hear through the grapevine” is de-motivating for the whole team.

Make sure you allow enough time for change to take effect before switching strategies. Most people have worked with or for managers who love to implement change, read leadership and development books, and love personality and work style tests. These same managers often experiment on their staff with an ever-rotating buffet of techniques and new ways of working. These managers may also get distracted, lack follow through, or find something newer, shinier and different to try out before giving time for pervious change to happen. Do not be that person. It is easy to get excited and want to do things for your team that look valuable, but after a while, people will not take you seriously when you are on the seventh motivation/productivity activity of the year and it is only June.

Be careful to make time to analyze change that has been implemented and make sure you are giving time for that change to happen – too much change at once can overwhelm, confuse, and upset folks. Think like a scientist, and use the scientific method for inspiration.
<table>
<thead>
<tr>
<th>Action</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Observe</td>
<td>The team does not feel motivated on Fridays</td>
</tr>
<tr>
<td>Formulate a hypothesis</td>
<td>Fridays are when the results of our work are published on the internet and often we are behind in our workload</td>
</tr>
<tr>
<td>Develop testable predictions</td>
<td>If we raise morale and get people talking, in particular near the end of the week, Fridays will feel better</td>
</tr>
<tr>
<td>Implement steps</td>
<td>Every Friday we will have a creative team building exercise early in the day</td>
</tr>
<tr>
<td>Gather data</td>
<td>We’ve done team building on Friday for a month and the following has occurred…</td>
</tr>
<tr>
<td>Make adjustments</td>
<td>Continue as is, make changes, develop new steps</td>
</tr>
</tbody>
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Be sensitive to the fact that change is hard, even fun change like lunchtime chess or volleyball. Even when it’s change you implemented yourself. It is hard not to let the day-to-day pressures of grant administration distract you from your mission. There will be times when you find yourself judging an employee who has a large workload but is currently taking a break and sitting at their desk doodling. There will be times when you wonder why your team took an hour to discuss longer term goals when there is so much work to be done right now. But be gentle with yourself and others. Not every day is shiny; growing pains and setbacks are normal.

**Summary**

“Ultimately, the operations and incentives of the organization should reinforce creativity. People at every level of the organization must be supported as they develop and apply the tools of observation and invention in their jobs. Everything from the company’s vision to its HR procedures and financial management structure, when properly aligned, can encourage creativity in the workplace.”

— Barbara Dyer

In summary, creativity should be a high priority at every workplace. All managers should actively explore ways to maximize their team’s creative thinking. Powerful and positive outcomes are possible if there is an authentic and well-intentioned initiative to change the culture at work. By providing tools and resources to foster creative thinking, managers can help achieve better quality work, higher retention, less stress, a better work environment, and more job satisfaction.

**About the Author**

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¶4120.34 Budgeting Professional Development for Sponsored Research Staff: A Scaled Approach
David Lynch, Benioff Children’s Hospital Oakland Research Institute

Many organizations provide budget support for the professional development activities of staff. The allocation is typically used for non-salary expenses and might compete with other uses, such as supplies, services, materials, and other unit expenses. Unfortunately, there are rarely sufficient funds to fully support staff participation in all professional development activities. Therefore, it is important that we manage these limited funds wisely. One way of doing this is by implementing a scaled approach to supporting professional development.

Staff development may include internal training opportunities, webinars, and external conferences and workshops offered by professional organizations. It makes sense for early career staff to begin with fundamentals and move into intermediate and advanced topics, while increasing their participation in their professional organizations over time. Special consideration should be given when licensure is a job requirement. Many sponsored research offices have staff that must be certified in various ways, including notaries, JDs or in some cases CRAs (Certified Research Administrators) and CPAs (Certified Public Accountants). If so, professional licensure can be supported by a special set aside of professional development funds outside the scope of elements considered below.

Distribution of support, planning, specializations, guidelines, professional organizations, and expectations should be taken into consideration, depending on the unique circumstances in your organization.

Consider distribution of support

Of the total funds available, set aside a reserve to pay for recurring, non-salary expenses. These can include general office supplies, services, and licensures. The remainder can then be split between work units, based on the number of FTEs. There may be other variables to consider, but the following shows one method of allocating professional development support:

FY17 funds will be split proportionally between both teams, based upon overall FTE
4 FTE are on Team A, 40% share
6 FTE are on Team B, 60% share
Prepare a planning calendar
Create a planning calendar for the entire fiscal year, including observed holidays, major deadlines, other key dates (i.e., fiscal year close), and all professional development opportunities, including anticipated cost, location, and the suggested job level of attendees. Include internal training opportunities, as well as local, regional, national, and international meetings. Add all NCURA training meetings and workshops, as well as those from other professional organizations, such as the Council on Governmental Relations (COGR), the Federal Demonstration Partnership (FDP), Association of University Technology Managers (AUTM), National Association of College and University Attorneys (NACUA), MAGI (Model Agreements and Guidelines International) east/west, Society for Clinical Research Administration (SCRA), and Society of Research Administrators International (SRAI). Keep in mind that many of these organizations offer recurring meetings from one year to the next, which allows the planning calendar to be copied into subsequent years with only minor revisions.

<table>
<thead>
<tr>
<th>Grants Team</th>
<th>Meeting</th>
<th>Dates</th>
<th>Location</th>
<th>Budget</th>
<th>Actual Cost</th>
<th>Difference</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan</td>
<td>NCURA Online Tutorial - Intellectual Property</td>
<td>1/5-3/2 Online</td>
<td>$250</td>
<td>Grants Specialist</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Feb</td>
<td>NCURA Online Tutorial - Primer on Clinical Trials</td>
<td>3/2-4/27 Online</td>
<td>$250</td>
<td>Clinical research specialist</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>March</td>
<td>FRA/PRA</td>
<td>3/1-6 New Orleans</td>
<td>$2100</td>
<td>Grant Specialist</td>
<td></td>
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</tr>
<tr>
<td>April</td>
<td>CRA review session</td>
<td>4/25 Chicago</td>
<td>$250</td>
<td>Grant Specialist</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Account for specializations
Each member of the staff should be given the opportunity to grow professionally and align their interests with a part of the existing research portfolio. An individual’s competency and expertise have a direct impact on individual job performance and on their work unit. Staff should be encouraged to become the “resident expert” or specialist on a sponsor, organization, or resource. Be sure to emphasize that staff are each responsible for reading sponsor notices, newsletters, and websites, and for reporting changes or other developments to the work unit. Doing so will allow the entire work unit to broadly monitor the research administration environment in order to be aware of, anticipate, and manage change. This approach also allows you to stretch professional development funds further, ensuring that a resident expert covers each area.

To begin, start with a list of internal and external organizations, newsletters, listservs, training classes, and other opportunities that regularly affect the unit. Staff can then choose which of the opportunities they will monitor in order to broadly and collectively scan the environment. Individuals should avoid unnecessary overlap and align themselves with a particular organization and its communications, giving regular updates at staff meetings. For example:

Each year, teams will identify organizations which offer professional development opportunities, decide which are of greatest benefit and assign which job roles are appropriate for
Assignments should be based on amount of research activity and job level:

- COGR – AVP, Director
- NCURA – AVP, Director, Managers, Supervisors and Grants Specialists
- National meeting (August)
- Pre-award Research Administration (March)
- Financial Research Administration (March)
- Regional meeting (April)
- FDP – AVP, Director
- AUTM – Patents/Licensing manager
- MAGI – Clinical Research staff
- UIDP – Corporate-sponsored research staff
- PCORI – Grants Specialists
- NCMA – Contracts Specialists
- NACCA and NACUBO – Grants Accountants
- NACUBO – Research Controller, Research Finance Director
- NACUA – Legal staff

Establish guidelines

All staff should take advantage of on-campus or internal workplace learning, webinars, general research administrative meetings, clinical research administrative meetings, and other learning opportunities. The class descriptions should directly support the mission of the work unit. Time away from the office must be requested in advance, approved, and recorded in the professional development calendar. Staff should also document an objective they want to accomplish as a result of the training.

Hourly or classified staff can attend classes offered by Human Resources and take advantage of other low/no-cost learning opportunities. Again, the class must be directly related to the job role and annual performance objectives for the current fiscal year. The anticipated cost and time away from the office should be addressed in the request. Supervisory staff will review all requests and approve based upon:

- Anticipated workload and staffing levels
- Alignment with job responsibilities
- Performance objectives
- Years of service, and
- Availability of funds

Salaried or unclassified staff are encouraged to attend internal classes and external local, regional, and national meetings. Costs can be minimized by attending nearby workshops and daylong seminars that do not require overnight travel. It is possible that the approved budget will not support all requests. Newly hired staff should first demonstrate competency in the job role (~6 months into position) prior to submitting a request.
**Professional development organizations**

Each team will need to determine which organizations offer the greatest benefit to the work unit so that limited funds can be put to the best use. Funds can be used for internal and external training opportunities and those that require overnight travel. Look for low- and no-cost alternatives, apply all discounts to maximize the use of limited budget dollars, and apply for travel awards when offered. Additionally, consider:

◆ Coordinating ride/room sharing, institutional registrations, etc. with other personnel. Review the attendee roster and identify individuals from your institution.

◆ Learning progressively, by starting with the basics, then moving into intermediate and advanced topics, corresponding to job level.

◆ Identifying learning opportunities appropriate to the job title and responsibilities.

After your professional development program has been in place for a few years, consider asking each job class to develop its own guidelines. In future years, guidelines can be reviewed/refined annually by those in a particular job class. Special considerations can be made for:

◆ Being an elected official in the organization

◆ Participating as a committee member

◆ Presenting on a topic, individually or as a panelist

◆ Being invited to speak/attend

**Set Expectations**

Work unit supervisors should determine who should attend the various learning opportunities. Those selected should review meeting materials, registration fees and deadlines, and conference hotel room rates. There are often discounts available for early bird conference registration and host hotels often offer a discounted room rate to conference attendees. Staff should always consider other cost-saving opportunities, such as early registration waivers or discounts for presenters, ridesharing, room sharing, and travel awards.

Attendees on larger campuses can determine who else from their campus is attending the event and coordinate the best coverage of sessions for the campus. This can be done through an online survey that solicits session attendance plans.

Upon return, staff should be expected to present a trip report to their work units and others on campus as applicable. Encourage staff to take the lead on implementing one thing that will improve sponsored research operations at your institution.

**Gradual immersion**

Consider gradual support and and corresponding expectations. Documentation of participation year-to-year will be essential. Below is an example of a gradual immersion schedule for attending NCURA annual and regional meetings:
Immersion Schedule | Expectation(s)
--- | ---
1st meeting | Attendance only
2nd meeting | Volunteer (e.g., registration desk, session evaluator, committee assignment)
3rd meeting | Apply to lead a discussion group or for a basic/entry-level role in the program (e.g., program committee, volunteer coordinator, dinner group coordinator)
4th meeting | Apply to present a concurrent session or be a panelist
5th meeting | Apply to present a half-day workshop
>5th meeting | Apply to become involved in organizational leadership (e.g., Regional board member) or to serve on specialty programs (e.g., traveling workshop, peer review, etc.)

Consider an additive immersion schedule in which attendees build upon meeting expectations each year. For example, during the third meeting, attendees are expected to fulfill the expectations for meetings 1 through 3; for the fourth meeting, attendees should meet the expectations for meetings 1 through 4, and so on.

Encourage employees to not spread themselves too thin, limiting participation to 2-3 activities annually. Over time, staff should consider inviting new presenters to join their panels and presentations, bringing new ideas and perspectives to presented topics.

**Closing Thoughts**

Through the responsible use of professional development funds, demonstrating the direct benefit to the work unit/institution and measuring operational improvements, you will be able to justify the continued support of staff professional development. In the annual report of activities, be sure to touch upon meetings attended, presentation titles and improvements resulting from professional development support. By demonstrating positive impacts in research administration, you will be able to sustain professional development support when competing with other uses for funds.

**About the Author**

**David Lynch** is an independent consultant, currently serving as Interim Vice President Research Operations at the Benioff Children’s Hospital Oakland Research Institute. He has held various sponsored programs positions at the University of Minnesota, Mayo Clinic and Northwestern University. He recently completed a four-year term on the NCURA Board of Directors as well as the NCURA Region IV Board. He is a coauthor of *A Primer on Clinical Trials for the Research Administrator*, and regular contributor at NCURA conferences, workshops, concurrent sessions and discussion groups.
Challenging Traditional Ways: Leadership, Trust, and Reducing the Administrative Burden

Anita Mills, Evisions; Susan Sedwick, Attain, LLC; Annie Lenfest, Smithsonian Institution; Robert Prentiss, University of Texas at Austin; Joseph Andrews, Wake Forest University School of Medicine; Paula Means, Wake Forest University School of Medicine; and Krystal Toups, University of Texas Health Science Center at Houston

In an effort to alleviate administrative burden, many federal agencies have granted more freedom to institutions when managing their federal grants. The overhaul of the OMB Circulars and issuance of the Uniform Guidance (2 CFR 200) was meant to alleviate administrative burden by loosening the regulations in some instances (e.g., effort reporting) and by providing clearer guidance in others (e.g., subrecipient monitoring). This freedom and clarity created a greater need for tighter internal controls to help institutions stay in compliance. However, greater freedom does not always translate into less oversight. Federal oversight often comes in the way of audit findings. This has led to the need for balancing risk with oversight and internal controls, thus research administrators are in a predicament. How do we develop better internal controls without increasing administrative burden? With limited resources, how do research administrators balance risk with compliance? How can best practices built around internal controls so as to not increase administrative burden?

Many of us struggle to reduce administrative burden within our offices. For research administrators looking to make changes at their institution, we find The Five Practices of Exemplary Leadership® (Kouzes and Posner) to be an excellent guide. Jim Kouzes and Barry Posner have been gathering data from their leadership practices for over 30 years. The data they have collected has helped shape The Five Practices of Exemplary Leadership, which provides a leadership model that can help leaders establish a vision for best practices. This article explores how leaders in research administration have applied these principles and exemplified the practices outlined by Kouzes and Posner.

INSPIRE A SHARED VISION

Leaders who provide a path for staff promotion create an environment for them to flourish. Supporting and retaining qualified employees is vital to any organization. Susan Sedwick, formerly of the University of Texas at Austin, inspired a shared vision when she developed a career ladder and secured competitive pay for her team. In order to be successful, Susan had to inspire her leadership to support her vision. Securing competitive pay for one team member is impressive, but securing competitive pay for an entire team is monumental—this is exactly what Susan was able to do by inspiring a shared vision.

Inspire a Shared Vision: Susan Wyatt Sedwick, PhD, Consulting Associate, Attain

When a leader gets people excited about the future, they inspire a shared vision. First, a leader must know what their vision is and then must be able to communicate
that vision to others. To create a unified mission, a leader must inspire the people they report to as well as the people who report to them.

**Leadership Challenge:**

What is your vision?

How will you communicate your vision to your leadership?

How will you communicate your vision to your followers?

Employees rise to the level of expectations set by leadership. If we want our research administrators to behave as professionals, we must treat them as professionals by setting expectations and examples for performance and by also providing professional development opportunities to assure advancement.

Ibarra (2005) states, “Growing your own leaders sends a positive message throughout your workforce. Promoting people within is good for morale and essential to a positive organizational culture.” But it takes more than rhetoric, it takes a commitment to sustainable funding, planning, mentoring, and consciously seeking ways to provide developing leaders the opportunity to gain experience with increasing levels of responsibility. Our profession is increasingly specialized, making it essential that emerging leaders have the opportunity to gain experience outside their area of expertise.

One of the hallmarks of a profession is licensure or examination. The Office of Sponsored Projects (OSP) at The University of Texas at Austin based its career ladder on the attainment of Certified Research Administrator (CRA) status. Our OSP facilitated a group study program to prepare staff members for the CRA examination. Since the examination fee was a barrier to some seeking certification, the office paid the fee on behalf of those who completed the study program. Additionally, staff that attained CRA status were assured of attendance at national meetings to fulfill the continuing education requirements required for the CRA. The study program was open to research administrators from across the entire campus.

Certified administrators are a valuable commodity on campus, and many of these professionals were being recruited to work in other offices. In response to this retention challenge, a career ladder program was developed that provided salary and promotion incentives for CRAs in combination with normal performance feedback requirements. This required an institutional commitment to that salary program. In its first 10 years, the program resulted in more than 75 professionals across the campus achieving the professional distinction of CRA, including all senior level and management staff in the OSP.

Turnover in research administration offices can exacerbate administrative burdens on researchers and create inefficiencies on multiple levels. A customer satisfaction survey at the University of Texas at Austin revealed the single biggest issue contributing to principal investigator dissatisfaction arose from frequent turnover in the central office (often caused by poaching of highly trained personnel by departmental units that offered much higher salaries). As a result, the university funded a one-time, permanent equity increase of salaries in the central office to bring salaries to a competitive level with departmental salaries.
MODEL THE WAY

Being a leader and trusting people to do the right thing can be a challenge. Fear of failure is one reason why we may not trust someone to act on our behalf. If we want to be trusted as a leader, we must model the way of trusting others. Would you allow principal investigators to submit their own Federal proposals? This question often creates panic when asked, however Krystal Toups of the University of Texas Medial School at Houston shows us there is nothing to be afraid of when we have faith in ourselves and reasonable business practices in place. When Krystal modeled the way for a change in how proposals were submitted at her institution, she freed up valuable resources and was able to provide a greater level of customer service to her faculty.

Model the Way: Krystal Toups, CRA, Director, Grants, University of Texas Health Sciences Center at Houston

A leader who knows who they are, and whose voice is in sync with their beliefs, will instill trust in their followers. People follow those they believe in and respect.

Leadership Challenge:

What do you stand for as a leader?
What are your personal/professional visions?

On a late Friday afternoon early 2012, my executive director asked me “Why can’t PIs submit their own grant proposals?” I paused to think about what she asked. I had just spent an hour telling her how PIs needed to get us their information sooner because we had several applications that almost did not make the deadline as we were waiting on their final application components. As the assistant director for grants at the time, major deadline days were trying. My team and I

would often spend the entire day corresponding with departments requesting final narratives for the grant submissions with only a few minutes to spare. Often we had to seek help from other authorized signing officials to get applications submitted in the remaining minutes before a deadline.

My first reaction to her question was protective, assuming we would not be able to ensure applications were submitted on time and as approved. Her response, “What if we could find a way to ensure the applications are not changed once approved?” Thinking there was no way we could do this, I agreed. “Great,” she replied, “I want you to lead the project and make it possible.”

My experience is that great ideas and innovations come with letting go of what is comfortable and challenging yourself, your staff, and university leaders to think in new directions. This process takes trust and modeling of the behaviors we want to see in others. In June 2012 we presented to the university a new mandatory process using our system-to-system submission software. Once the central Sponsored Projects Office reviewed the application, the administrative components are locked, and the proposal is routed back to the PI and their department to upload the final narrative and submit the application. To get this point, we had to have the support and buy-in from executive leadership. We contacted other universities that had similar processes and worked with our system provider to create a test environment that allowed us to lock down critical components of the application (e.g., budget, budget narrative) following approvals.

Because we took a chance, and put trust into our people and processes, we have tremendously reduced review time and created efficiency in our submission process. Now we spend deadline days facilitating reviews and providing better customer service instead of worrying about collecting documentations and panicking about making deadlines. Our PIs and departments are accountable for their submissions (i.e., trust) and are thankful to have the extra time to work on their narratives.

And it all started by asking a simple question, “What if?”

**CHALLENGE THE PROCESS: CASE 1**

Thinking outside the box and finding ways of balancing risk with quantifiable data is critical to successful operations. Subrecipient monitoring has become a necessary part of daily life for institutions of all sizes. Being able to assess risk for a subrecipient and then apply monitoring standards based on risk level is key to reducing the amount of administrative burden associated with subrecipient monitoring. Robert Prentiss of the University of Texas at Austin challenged the process when he created a risk assessment tool to manage subrecipients efficiently and effectively.

*Challenging the Process: Robert Prentiss, Senior Grants and Contracts Specialist, University of Texas at Austin*

The fear of failure may be the #1 reason people do not employ the leadership practice of Challenging the Process. Embracing mistakes and creating a safe place for people to fail is critical to foster this practice. Very few people like change, but resistance to change may lead to failure.
Leadership Challenge:
What would you do if you were not afraid?
Is there a good idea you can support? Can you create a safe place for this idea to fail/improve/succeed?

Uniform Guidance requires that risk assessment be performed on subawards to evaluate the subrecipient’s risk of non-compliance while documenting an institution’s efforts to mitigate risk. At first glance, the requirement seems straightforward and commonsensical. But institutions face a number of challenges implementing this requirement. First, how can risk be consistently identified and evaluated? Uniform Guidance offers a handful of examples but nothing systematic or easily quantifiable.

Second, because institutions are not directed to focus primarily on any particular type of non-compliance—unallowable costs, for instance—the number of potential risk factors is almost endless. Some risks, such as the results of the subrecipient’s most recent audit, are relatively uncontroversial. Other risks, however, like non-compliance involving human subjects, pose a much greater threat to the institution and to the research community. So how should risks specific to a project be considered? How do institutions develop an environment of risk tolerance in some areas when non-compliance involving human or animal subjects is not easily commensurable with risks of a purely financial variety?

Lastly, not all institutions have the same variety of subrecipients with the same set of potential risks. Some institutions issue a large number of subawards to a wide variety of foreign entities, while other institutions work almost exclusively with domestic partners. In-depth questions about the subrecipient’s location might be appropriate for the former, but overkill for the latter. Similarly, many pass-through entities work primarily with large, established academic institutions that undergo an annual single audit. A high-dollar subaward to a non-academic entity may be considered higher risk.

Because of these variances, when building a risk assessment questionnaire (RAQ), the Federal Demonstration Partnership (FDP) took an unusual approach. Unlike many other FDP forms, the RAQ is modifiable. An institution may add to or revise the questions and answers to more accurately assess the types of subrecipients common to their institution. And while each RAQ generates a set of numerical scores, the form does not dictate a single set of thresholds to determine a subaward’s risk level. Two sets of thresholds currently in use are published in the RAQ’s guidance, and institutions are free to adopt them or develop their own.

Is there risk in allowing modifications to the RAQ and of not declaring a straightforward threshold for high-risk subawards? Undoubtedly. But the broader goal of accurately identifying risk remains paramount. Improving accuracy of risk assessments—and reducing the related administrative burden on all parties involved—requires letting institutions experiment and learn from their mistakes.

CHALLENGE THE PROCESS: CASE 2
Being part of a community and looking outside our organizations can be key to
solving problems. Wake Forest School of Medicine was faced with the challenge of reducing the turnaround time for IRB review. Wanting to make their process more efficient, they looked outside their organization for a model of excellence. As necessary adjustments to IRB reviews were made, metrics were employed to evaluate and to educate. Joseph E. Andrews and Paula Means at Wake Forest Medical challenged the process and reduced turnaround time for IRB reviews.

Challenging the Process: Joseph E. Andrews, Jr., PhD, MA, CIP, Director, Human Research Protection Program & Institutional Review Board and Paula M. Means, MPA, Assistant Dean for Research, Wake Forest School of Medicine

Changing critical administrative systems that work in order to try something that may not work make even experienced researchers nervous. Yet in late 2011, we identified a problem regarding turn around time for our IRB that needed to be addressed. The average Institutional Review Board (IRB) review time was just that—average. It had been a long time since the process at Wake Forest had been reviewed, and we realized we were operating within a model developed many years ago for a paper-based world. Expectations of senior leaders and faculty members had evolved dramatically, though our processes had not. We needed to increase efficiency while maintaining quality.

The graphic below illustrates how we challenged and changed the process.
Once the problem was identified — the most critical step in problem solving — the IRB leadership team looked to see what we could learn from IRBs that were successful at achieving better than average review times. We discovered that commercial IRBs had the most modern, efficient systems able to handle reviews with speed and accuracy. Although we couldn’t identify an academic medical center that had adopted a similar model, the IRB leadership team developed a plan for redesigning the number, membership, and schedule of IRB panels based on commercial IRBs and presented it to the Assistant Dean for Research.

Leaders empower individuals by presenting a problem and trusting them to find solutions

Our plan consisted of splitting the four current IRB panels into eight with membership of 10 to 12 on each board. Panel expertise was selected to ensure we had appropriate reviewers for each of our high-volume research areas on at least two panels. By modifying the schedule so that each panel met every other week, we could rotate through the boards every Monday through Thursday, with experts in our major research areas available each week. With this model, a study could be reviewed the week after it was received on nearly every occasion. With smaller agendas, meeting duration would be reduced from ~3 hours to an hour, leaving more time for discussion. Although these changes were a radical departure from the status quo, the Assistant Dean gave us permission to move forward. We were entrusted to find a solution and we did that by presenting our research to the IRB Chairs, committee members, and stakeholders, allowing us to conduct a full-scale pilot of the proposed model.

Leaders motivate individuals to come up with innovative ways to challenge the process

Prior to proposing our plan to the research community and senior leadership, we knew that we had to be prepared to answer tough questions. The Assistant Dean supported our efforts to develop an innovative solution and encouraged us to work with IRB members to finalize the process. It was important that we put our idea through the same type of scrutiny researchers use when developing a study protocol. We were completely reconstructing a key part of the university’s infrastructure; therefore we needed to present leaders with a compelling rationale, a viable hypothesis on why this would work, and clear rules for disengaging if the new process was unsuccessful.

In developing our presentation, metrics and questions related to ethical and logistical issues were prepared in advance. Advanced preparation paid off. Senior leaders were impressed with our role-out plan and the buy-in garnered from IRB members. Faculty support bolstered our credibility with leaders and earned the trust necessary to secure their agreement to a four-month pilot.

Leaders encourage individuals to take risks and learn from the process

The Assistant Dean accompanied the IRB leadership team to a meeting with the Dean of the School of Medicine to present the new process. This show of support encouraged the IRB leadership team and signaled departmental support for the project. With encouragement from the Assistant Dean and support from the Dean,
the pilot was conducted. Our new process was successful and we subsequently published on the new model and transformation journey, as well as the sustained benefits years after the process changed:


**ENABLE OTHERS TO ACT**

Great leaders foster collaborations and create an environment for people to work as a team. Leadership requires being a good communicator and creating an environment where people feel safe to share opinions and information. When people openly share, team members get the information they need to do their jobs. At smaller institutions, research administrators often wear several hats often leaving staff feeling overwhelmed. At Western Michigan University, Annie Lenfest enabled others to act by creating an informal process of face-to-face meetings between central and departmental administrators. Face-to-face meetings improved relationships and kept information flowing between units, ensuring critical information did not get lost in translation. This process led to improved customer service for the faculty at Western Michigan University.

*Enable Others to Act: Annie Lenfest, MRA, Grant/Contract Administrator, Smithsonian Institution*

Trust creates a common bond between people and ensues when we feel others have our best interests at heart. The leadership practice of Enabling Others to Act is a cornerstone to building trust. When a leader enables others to act, they foster collaboration and create a team environment in which people feel empowered.

**Leadership Challenge:**

Do you trust those you lead and who lead you?
Do they trust you?

In a university setting, departmental administrators (DAs) are not only responsible for routine duties related to the academic arm of the department, they also act as grant managers—supporting graduate research appointments, reconciling budgets, tracking cost share and effort, and so on. Without adequate, specialized training, DAs can become overwhelmed by the regulations that accompany sponsored research.

In an effort to alleviate some of the DA’s grants management burden, an informal process was established to share information between the central RA office and the
departments. The pre-award administrator for the College of Engineering scheduled routine, face-to-face quarterly meetings with each departmental office administrator. During these meetings, the pre-award administrator shared relevant information regarding changes in university and sponsor policies and procedures related to grants within that department. The departmental staff person discussed current grants that had upcoming action items. Both administrators discussed questions, concerns, and came up with an action plan for anything requiring immediate attention.

The goal of these meetings was to keep information flowing between departmental and central support personnel. This collaboration reduced the administrative burden on the departmental administrator by providing access to information that was readily available in the pre-award office, thus freeing up DA time to complete other tasks. The quality of service the DAs were able to provide their faculty improved, resulting in researchers feeling more capable and supported in their quest for research funding.

ENFORCE THE HEART

Encourage the Heart: Anita Mills, MA, CRA, Solutions Consultant, Evisions

Before becoming a solutions consultant at Evisions, I was a researcher and research administrator for 20 years. As a solution consultant, I am no longer involved with the day-to-day research management. I stay connected to research administration by going to conferences and learning from my peers.

A research psychologist at heart, I am an educator who enjoys sharing ideas and information. My idea for helping our industry reduce administrative burden grew from a poster session to panel discussions and now an article. The journey and evolution has been personally rewarding and fun.

Leadership Challenge:
What business process can you make fun?
Who can you recognize for their contribution?
What can you do to create community spirit?

Assembling panels and sharing the information that led to “Challenging Traditional Ways: Leadership, Trust and Reducing the Administrative Burden” has been one of the best professional experiences of my career. Panelists were encouraged to speak from the heart and share about how they made changes at their institutions. This sharing was meant to inspire others to make changes at their institutions by challenging traditional ways. Having a platform for people to share ideas honestly resonated with our audiences, and we were amazed at the reception we received.

The creation of this article grew out of a poster session and panel discussions, with input by many people along the way. It has been a welcome surprise to see how an idea for a simple poster grew into something larger as different people contributed—truly an act of encouraging the heart. We encourage readers of this article to apply the basic concepts outlined here to develop and share best practices to reduce administrative burdens while facilitating scientific discovery.

Below we recognize everyone who contributed to this process:
2015 Society of Research Administrators Annual Meeting, Las Vegas, Nevada
Poster session: Challenging Traditional Ways: Leadership, Trust and Reducing the Administrative Burden: Anita Mills, MA, CRA, Senior Solutions Consultant, Evisions; Susan Wyatt Sedwick, PhD, Consulting Associate, Attain; Robert Prentiss, Senior Grants and Contracts Specialist, University of Texas at Austin; Annie Lenfest, MRA, Grant and Contract Administrator, Smithsonian Institution

2016 Society of Research Administrators, Northeast and Southern Section Meeting, New York, NY: Challenging Traditional Ways: Leadership, Trust and Reducing the Administrative Burden

Anita Mills, MA, CRA Senior Solutions Consultant, Evisions; Susan Wyatt Sedwick, PhD, Consulting Associate, Attain; Paula M. Means, MPA, Assistant Dean for Research, Wake Forest School of Medicine; Karen Mitchell, Senior Director, Grants Management, Temple University


Anita Mills, MA, CRA, Senior Solutions Consultant, Evisions; Susan Wyatt Sedwick, PhD, Consulting Associate, Attain; Brian N. Squilla, MBA, Vice President for Administration & Chief of Staff, Office of the Provost; Thomas Jefferson University; Kim Small, CRA, Director Sponsored Programs Services, Washington State University

2016 Society of Research Administrators, Western/Midwest Section Meeting: Portland, Oregon May 15-18, 2016)

Anita Mills, MA, CRA, Senior Solutions Consultant, Evisions; Susan Wyatt Sedwick, PhD, Consulting Associate, Attain; Domenica G. Pappas, CRA, Director, Sponsored Research and Programs

2016 Evisions Research Conference, Portland Oregon, July 17-19

Anita Mills, MA, CRA, Senior Solutions Consultant, Evisions; Jon Teuber, MA, Director, Office of Sponsored Programs, Ann & Robert H. Lurie Children’s Hospital of Chicago; Anne P. Schauer, MA, CRA, Director of Research and Sponsored Programs, Miami University; Stephanie Lezotte, CRA, Director, Office of Sponsored Programs, Rowan University

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Anita Mills, MA, CRA, is a self-proclaimed technology geek and recognized expert in electronic research administration (eRA) systems, presenting frequently at NCURA, SRA and other industry association events. A 2007 graduate of NCURA’s Leadership Development Institute, Anita has severed on regional and national program committees, participated in standing committee for NCURA and FDP, and served as session evaluator at regional and national meetings. She has over 50 presentations and publications and currently is a Solutions Consultant for Evisions. Anita can be reached at anita.mills@evisions.com

Dr. Susan Wyatt Sedwick, PhD, CRA is a consulting associate for Attain, LLC with over 22 years of experience in research administration. Retired in 2015 as an associ-
ate vice president for research and director of the Office of Sponsored Projects at The University of Texas at Austin, she was responsible for both pre- and post-award financial administration units with oversight of over $630 million in annual sponsored projects expenditures. Dr. Sedwick served as chair of Phase V of the Federal Demonstration Partnership (FDP), was active in the Council on Governmental Relations (COGR), and received the National Council of University Research Administrators (NCURA) Distinguished Service award in 2012 and the NCURA Region V Distinguished Service Award in 2014. Dr. Sedwick is a frequent speaker on the topic of research data security; export controls as they apply to universities, human capital development, and strategic planning. Susan can be reached at ssedwick@attain.com

**Annie Lenfest** is a Grant and Contract Administrator for the Smithsonian Institution. She began her career as a contract coordinator for the University of Central Florida after earning her Master’s in Research Administration from them in 2013, and developed a love for proposal development through her role as the sole research officer for Western Michigan University (WMU) College of Engineering. Annie will complete a second graduate program this fall in Organizational Learning and Performance from WMU. She is as passionate about helping her organization improve its quality of service, as she is about helping each PI achieve their research goals. Annie can be reached at lenfesta@si.edu

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**References**


### 4120.36 Authentic Leaders, Effective Leaders
Shari Harley, Candid Culture

People listen to, follow, and trust strong leaders. But what do strong leaders look like? What do they do? What if strong leaders look and sound different from what we typically expect?

We often think of strong leaders as charismatic, decisive visionaries who can captivate a room and galvanize a group, and perhaps much of this is true. But are these also the behaviors that allow employees to trust leaders, thus making them effective leaders? Employees tend to stay longer with organizations, be more committed, and do better work when they trust the organization’s senior leaders.

So what creates trust in a leader?

People trust people they know — people whose actions and words are consistent and congruent— people who care about others. Below are five leadership practices that create strong and trusted leaders.

**Effective Leader Practice #1: Be Yourself.**

People want to work with other real people. Worry less about how you think you’re supposed to look, sound, and be, and just be yourself. Authenticity goes a long way toward engaging with others. Bring your humanity to work.

**Effective Leader Practice #2: Be Humble.**

Strong leaders aren’t perfect. They admit mistakes and adjust accordingly.

Years ago, I worked with a CEO who could often be heard saying, “I’m not the smartest guy in the room, but…” In truth, he usually was the smartest guy in the room and everyone knew it. He was attempting to be humble but his attempt fell flat, and instead of ingratiating himself as ‘one of the people,’ he appeared arrogant.

No one likes to make a mistake, and sharing our mistakes with others is even less desirable. It takes strength to admit an error.

Strong people don’t need to be seen as perfect. They admit fault and fess up to things they don’t know. I suspect that many of us think that admitting we made a mistake or don’t know how to do something makes us appear weak. This couldn’t be further from the truth. Provided that you’re competent and do a good work, people respect others who are willing to tell one on themselves and admit when they are wrong or in need of help.

If you wish you’d done something differently, tell people. And communicate to them the changes you’ve made as a result. If you go down the wrong path and it’s evident, talk about it openly. Everyone’s talking about it anyway so you may as well set the expectation and manage perceptions as best you can.

Strong people fess up when they make a mistake. Weak people cover their mistakes or blame others.
Effective Leader Practice #3: Be Visible.
Spend time with employees. One thing that leads to trusting leaders is getting to know them, at least a little bit. Encourage leaders to walk around offices, go to skip level meetings in which the manager’s manager meets with employees, and say hello to people in the hallway.

As a leader, it’s important to remember that the people who really know what’s happening in your organization are the people closest to the work. Spend time out of your inner circle, hang out in cube land, walk the floors, and talk with people in the breakroom. At company-wide meetings and events, don’t sit with your peer group, but don’t sit alone either. That’s how you’ll be seen as accessible, gain trust, and find out what’s really going on in the organization.

A few months ago I lead a daylong training that an entire organization attended. People were seated at round tables, with eight people to a table, except for the CEO. No one sat with him. He sat alone all day. People were afraid of him, didn’t like him, or were concerned about how it would appear if they sat with him. What a missed opportunity.

Senior leaders hire consultants like me to find out what’s really happening in their organizations because employees are afraid to give bad news to a senior leader. The better your title, the less information you may get. Many employees are convinced that if they speak up and share bad news they will be fired or marginalized. When leaders are visible to employees, fear is reduced and communication increases.

Effective Leader Practice #4: Be Consistent.
A few years ago, I worked with a charismatic, extremely likable CEO who employees distrusted. I was an outside consultant and couldn’t figure out why the organization’s managers didn’t trust him. When I asked, the managers gave me a few examples of how the CEO said one thing and did another. For example, he put a safety policy in place prohibiting employees from talking on their cell phones while driving during work hours, but he was regularly seen talking and driving. That’s a problem. The CEO also put cost cutting measures in place and told employees to stay at inexpensive hotels when they traveled for work. He then took the senior leadership team on a retreat at a very expensive resort. That doesn’t work. You can’t say one thing and do another, and expect people to trust you.

Effective Leader Practice #5: Be Human.
I worked with a fellow leader for four years before learning he was married and had children. He finally brought his wife to a company event, and his direct reports almost fell over. Because he never talked about his personal life, no one knew anything about him.

Don’t overshare about your personal life. Employees don’t want or need to know the play-by-play about your home life. But not knowing anything is equally odd. Strike the balance of sharing about your life without over sharing or treating work as therapy.

I had my first baby last year and never told clients I was pregnant. I am a key-
note speaker and trainer who travels. I was afraid people would worry I wouldn’t show up when they learned I was pregnant or worry that I would never travel again after I had my son. Neither was or is true. I never missed an engagement while I was pregnant, and I still travel every week. (Look for my son at book signings!)

After my son was born, I sent an announcement to our clients and was overwhelmed by the positive response and support. Now when I do speaking engagements, it’s natural to talk about my son and the challenges of working and raising a child—a challenge that many others are facing and can connect with.

The people you work with want to know you. They want to know what’s important to you. They want you to know what’s important to them. Take an interest in people. Ask questions. Listen to the answers. Be visible. Walk around. Be vulnerable. Admit mistakes, missteps, and failures. You’ll gain respect by doing so.

Remember: People want to work with other real people, people they can come to know and trust. Those are the people we follow.

About the Author

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Once, when starting a new position, I held office hours so that any member of the staff could drop in and spend 15 - 20 minutes chatting with me about what they do. The staff was about 95% female, as is the case nationally in university research administration (Shambrook, et al, 2015). One of the very few male employees came into my office armed with a list of questions. He began with, “How do you think your leadership style will be different since you are female?” Without thinking much, I replied, “For one thing, I get asked questions like this that my male counterparts do not, which might make me a bit grouchier than them.”

Upon reflection, I wish I had been more patient and considered the deeper implications of his question. By “different” did he mean “than all my previous supervisors” or “than the status quo?” Or did he mean “than my ideal leader” or something else? I wonder if the fact that I am also Hispanic, and was then a relatively young leader, emboldened him to regard me with more familiarity and less deference than he might have otherwise? I’ll never know. And because I didn’t have a meaningful conversation with him about the nature of his question, I missed an opportunity to learn something about him and—potentially— about the environment in which I was expected to lead.

To be fair, this employee was not breaking new ground with his question about differences in leadership styles. Many people will tell you that women lead differently than men. In fact, an email I received just last month invited me to attend a workshop called “What Feminine Leadership Looks Like.” The basic premise is that men and women are fundamentally different and that their differences manifest themselves in different approaches to leadership. For example, there’s a common belief that men are especially decisive and women are more likely to be consensus-builders. Whether this belief is supported by research or not, I’ve known male leaders who were excellent at building consensus and plenty of female leaders who were authoritarian, top-down decision-makers.

Along my own leadership journey I’ve been subjected to many assumptions about how I would lead differently than a man. Those assumptions likely shaped the way people have interacted with me, and my awareness of those assumptions may have caused me to adjust my behavior in ways about which I’m not even conscious.

As a wife and mother, I am expected to juggle work and home duties and fuss endlessly about said juggling in ways my male counterparts are not. That’s not to say that men don’t juggle. They simply are not scrutinized in the same way—by men or women— for their choices, priorities, and juggling techniques. On more than one occasion, I have been asked in interview settings whether the travel would be a problem for my family. I’ve also been advised upon receiving a job offer to go home and talk it over with my husband. My anecdotal observation is that this happens less frequently to men, perhaps because they are presumed to know what’s

1 Encountering racism in the workplace is a topic that could fill a whole separate article.
best for them. A male candidate may volunteer, “I’d like to talk this over with my spouse,” but it’s my impression that they are not as likely to be instructed by a potential employer to do so.

Being female in an executive role at a university is tricky for a variety of reasons. For one thing, despite the meritocracy ideal in higher education, gender bias still exists. Universities are not exempt from narrow-minded thinking, by men or by women. If you let it get you down, you can be paralyzed by the weight of people’s prejudices. I’m not talking about frank discrimination or sexual harassment, though both of those also occur, and they are very serious issues. I’m talking about that #everydaysexism of Twitter hashtag fame which is so pervasive as to almost be accepted as normal.

Sometimes sexism is overt, like when I convene a meeting and, despite sitting at the head of the table, clutching an agenda, I am asked by male attendees for coffee. Or when men interrupt me and talk over me (and the other women in the room) but listen attentively to other men. Other times, it’s more subtle. For example, when a man shakes hands with all the other men in the room and merely says hello to me without shaking my hand, or when attendees—male and female—arrive at an event, look at me and ask, “So, when will Dr. Rivera be getting here?”

Because #everydaysexism is so ubiquitous, some women in executive roles feel they need to overcompensate by behaving more like their male counterparts. A female coworker once told me that I should learn golf, so I can be “one of the guys.” The line of thinking is that many decisions get made informally when off the clock and, if you’re not there, you miss out on important opportunities. The fact that nobody ever has invited me to play golf suggests to me that my own lack of knowledge about the game is not the salient factor. It’s possible that being true to myself in this regard has been a liability of sorts, but I have no way to quantify whether I would have moved up the career ladder more quickly with an impressive golf swing.

Another thing women sometimes feel they need to do in order to get ahead is to put work before everything else, even if it means not having children. This is ironic since virtually all of the male executives I know have children. This implies that the key to getting ahead is not actually foregoing children but rather having a partner at home who can raise the kids. Of course, the belief that childrearing is mostly “women’s work” may not be as pervasive as it used to be, but the force is still strong with this one. Meeting scheduled before 9:00 am and after 5:00 pm will disproportionately burden female employees. The same goes for large projects assigned over weekends. I’ve seen modest changes to office culture in this regard over the last 20 years (hello, lactation rooms!) and I hope that as more women climb the executive ladder, reasonable approaches to blending home and work life will become the norm.

It’s also the case that women aspiring to leadership roles run the risk of becoming the following clichés: office mom, team nurse, guidance counselor, social director, and relationship expert. Nobody expects a male CEO to do any of those things. Ask yourself—and be honest—in your office, when a cake needs to be ordered for a birthday or shower: who does it? When somebody needs a couple of Advil for a headache: who do they ask? When it’s time for that annual picnic: who organizes
the games? When teens are unruly or marriages get shaky: who gives the best advice? I’ll bet good money that women fill most of these roles in your office, and I’ll also wager that doing so somehow makes them seem less like executive material. When our male counterparts step up and start ordering cakes, employee nurturing will not be seen as an exclusively feminine domain. Until then, volunteering for this sort of thing can be a liability for a woman who aspires to lead.

Plainly put: women leaders are in a tough spot. At its most extreme, they are forced to choose between affirming the value of human relationships (and, in so doing, undermining their own authority) or learning golf. This has got to change.

Fortunately, despite the many challenges of gender bias in the workplace, even in higher education, research administration is a profession that provides rich opportunities for career growth and a ladder to executive leadership for women. Assistants can become Coordinators. Specialists can become Managers. Directors can become Assistant Vice Presidents, and so on. The ability to move sideways, from pre- to post-award or from IRB to biosafety, means job changes can add breadth to your resume and not merely specialization. There also are numerous opportunities for movement from central administration to a department (or vice versa) and between universities. This is good news for women who aspire to executive leadership because, unlike many other professions, there are various pathways to increasing responsibility.

My first job in research administration had the unlikely title, “Human Research Education and Review Officer.” I arrived at that position, like so many of my research administration colleagues, by accident or, rather, by serendipity. It wasn’t as though I had been planning a career in research administration. In fact, I didn’t even know it was a profession. I just happened to be a trailing spouse looking for work at a time when a university was looking for someone with research experience and federal regulatory knowledge. I had both, but I didn’t know a thing about human research protections. Armed with freshly printed copies of the Code of Federal Regulations obtained from a public library (pre-internet), I taught myself enough to speak persuasively during the interview, knowing I was woefully underqualified. But they took a chance on me and, as many of us do, I learned what I needed to on the job. Over the course of seven years, I grew in the position and was handed increasingly more responsibility until, eventually, I was made Director of Research Protections. There’s a lesson in that, especially for women. Studies show that men routinely apply for jobs when they lack some of the required qualifications in the vacancy announcement, while women tend to hold back and apply only for those jobs for which they have 100% of the stated qualifications. In this regard, self-belief is a valuable tool.

Self-belief was important when I found myself trailing again, this time moving to a state where I didn’t know anyone. Audaciously, I blanketed my new metro area with resumes by emailing every NCURA member, and every alumnus of my high school, college, and grad school. I then followed up by cold-calling the Deans of all the local Universities to ask if I could come meet them. None of them had openings, but one medical school Dean agreed to see me only because a dozen or so recipients
of my email had forwarded my resume to him. After our meeting, he created a new position for me, taking the risk that I would prove useful. This was powerful evidence of the value of networks.

But self-belief and strong networks are not the only things a woman needs to advance to leadership. Sometimes making the leap from supporting roles (also known as “pink collar” jobs) to executive roles requires more education. And this is especially true at universities, where degrees are the coin of the realm. Fortunately, many of us work at schools with tuition benefits that allow the completion of a bachelor’s degree or the acquisition of a master’s or doctoral degree while on the job. I had been a research administrator for 10 years when I realized I would need to further my education in order to advance. Going back to school at age 35 with a working spouse, two children, and a full-time job was not easy for me or for my family. I relied heavily on my husband to be the primary parent during those years and I missed many events: teacher conferences, doctor appointments, holiday pageants, and soccer games. But I had reached a career plateau and the Ph.D. I earned opened up a whole new set of positions for which I could qualify. Despite the numerous sacrifices, I know the investment was a good one. I trust that our children will not remember the games and pageants I missed and will instead carry with them the values of hard work and partnership that both their parents provided.

This is not to say every woman in research administration needs to return to school in order to become a leader. I’ve worked with and been mentored by many women who rose through the administrative ranks without having to go back for another degree. However, additional education can be helpful for expediting advancement, as well as for inspiring others to entrust you with more responsibility. Also, there’s no denying that faculty members accord research administrators with more respect when they feel we can speak their language. This is not just academic snobbery. Completing an independent research project for a master’s thesis or a doctoral dissertation provides a window into the life of a faculty member that is helpful for relating to—and empathizing with—our primary clients. The ability to relate can make the difference between finding a win-win solution and watching a minor conflict escalate into a federal case—sometimes literally.

It’s also important to note that degrees are not the only form of education or professional development that can be useful. Through NCURA, I was fortunate to receive formal training in leadership that has been invaluable for my development as an executive. NCURA’s Leadership Development Institute (LDI) program (which evolved into the ELP - Executive Leadership Program) provided career coaching, feedback on effectiveness and style, and other helpful insights I draw upon every day. It also provided a cohort of other emerging leaders, many of whom have become my most trusted advisors and lifelong friends. This has been critical to my success because I draw upon these relationships—for advice, for support, and for commiseration—in a way that I cannot draw from among other colleagues on my campus. There is only one person at my university who has my job: that’s a very small circle.

In addition to trusted colleagues at other universities, I have learned so much
from important mentors throughout my career. Some were formal and assigned, while others evolved organically. It’s important to note that very few of my mentors have been women. Contrary to the notion that mentors must look like or identify with the struggles of mentees, my most effective advocates and role models have been mostly older men. They could not advise me well about the elusive “work-life balance” ideal or how to handle a sexist joke at the office. They were not especially sensitive about how scheduling meetings at 7:00 (whether am or pm) might disproportionately disadvantage a junior female employee. And, yet, they went to bat for me, in big ways and small, all of which have made a difference in my ability to achieve my career goals. These men helped open doors that made it possible for me to prove I was capable, and I owe them a debt of gratitude.

I’m now 20 years into this accidental career, and at my third university post. From where I sit, as the Vice President for Research and Technology Management at an AAU (Association of American Universities) campus, I am deeply grateful for the opportunities to grow in my research administration career. I love my profession because it allows me to learn new things every day and to help other people achieve greatness in their fields of expertise. Don’t get me wrong; it is a hard job and I am never off-duty. A fire in a lab, an injured research subject, or an unexpected audit finding can turn the whole office upside-down in an instant. And I accept that being the only woman in the room affects the way some people perceive the job I do—this is a distraction my male colleagues simply don’t have. But rising to the challenge has been enormously rewarding.

In reflecting on this subject for the purposes of writing this piece, I have tried to distill my thoughts into lessons learned, sometimes from making big mistakes. I share them here as advice for women aspiring to leadership in research administration or wherever your path leads you. By-the-way, all of the following pieces of advice are meant to be practiced, like yoga. Don’t worry about getting them right. Instead, aspire to train your leadership muscles and get a little stronger each day. And forgive yourself when you fall short. You’re only human.

1. Say yes to new opportunities as much as possible, even when you don’t feel you are 100% qualified. Step outside your comfort zone. When invited onto new paths of your leadership journey, be ready and willing to take the next step.

2. Hone your judgement about what non-essential tasks can be ignored. Things will get assigned to you because somebody thinks it’s woman’s work or you may be offered a responsibility that would bog you down in ways that actually harm your career growth. Don’t let extraneous things distract you from your goals.

3. Work harder than you should have to. We are not living in a post-feminism society. There are still people who will expect less from you because you’re a woman. Don’t give them any evidence to support their bias. It’s not fair, but you knew that already.

4. Act like you belong— even when you feel like you’re crashing the party— especially when you feel like you’re crashing the party. When you act like you
belong, people are more likely to treat you like you belong.

5. Networks are important. Foster them. Use them. Give back to them. Not just the professional ones—also the ones that feed your soul. Professional networks can advance your career; personal networks can help you keep your sanity.

6. Choose your battles. Every real or perceived slight need not be dignified with a response. You have every right to take offense, but you don’t have to fight foolishness every time you encounter it. There also can be grace in giving people the benefit of the doubt. We all make mistakes.

7. Let go of the fantasy. You cannot “have it all” at the same time—none of us can. You can focus on work for a time and neglect your family a bit. You can focus on family for a time and put your career on auto-pilot for a bit. But you can’t—and nobody can—be excellent at everything at the same time. (*A supportive partner is key—thank yours, frequently and profusely.)

8. Expect some loneliness. The higher you climb, the fewer women will be in the room for most of your day. You may not get invited to play golf. Your direct reports will want to socialize without you. You will probably eat lunch alone at your desk more often than you imagined. That’s true for all executives, regardless of gender. Get your emotional needs met somewhere else.

9. Be open to the better idea. As a woman, you may sometimes feel you have something to prove—and often you do—but that doesn’t mean other people don’t also have great ideas or that you’re not sometimes flat-out wrong. Seek input and feedback from trusted advisors and don’t be reluctant to pursue someone else’s better idea, even if it means changing your own mind about the best path forward. Then give them credit.

10. Set goals and periodically take stock of your accomplishments. Sometimes you have to stop and look back in order to appreciate how far you’ve come. Conversely, if you don’t know where you’re headed, it’s hard to know if you’re getting there.

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Supplementary Material

¶4120.38 Managers as Leaders: Delivering the “Why?”
Kerry Peluso, Emory University

A manager manages. The things they manage include, but are not limited to, the management and development of processes, procedures, and applications. They manage the completion of tasks. They educate and communicate. They provide the What, When, Where, and How to their staff and to those who are responsible for conducting the tasks or projects they manage. A manager’s ability to effectively provide the What, When, Where, and How is essential to creating a successful work environment. Without effective management, offices and staff falter.

A leader provides vision. They provide the inspiration that seeds motivation. They show people the path to moving forward. They provide the Why. If a group of people have the What, When, Where, and How, progress can theoretically occur, but achieving anywhere near full potential and true staff satisfaction cannot occur without effective leadership and understanding Why. Without the Why, without effective leadership, an organization can expect low morale, low to mixed performance, and staff turnover.

When reviewing the organizational chart for their unit, a manager will see their position with a line reaching out to the position they report to. The largest mistake a manager can make is to assume they provide the “management role,” while the person they report to provides the “leadership role.” Managers who don’t realize they need to provide both management (What, When, Where, and How) and leadership (Why) will struggle in meeting their goals over any period beyond short term. Sadly, even for managers who understand their area’s need for leadership, when time and staffing are limited, responsibilities are numerous, and deadlines are many, providing the “Why” is often put on the back burner or near fully abandoned. In the field of research administration, these circumstances are all too common, so lack in leadership in the research administration office is, unfortunately, not rare. Sadly, this dynamic only further reduces productivity in the already resource-stretched organization. It does not need to be this way.

To achieve any level of success as a manager, one must lead as well as manage. It is a big mistake for a manager to look to someone else to provide leadership for their area. As a manager, one needs to determine what leadership their area needs and how to best provide it. They need to evaluate whether they are effectively leading their area. If they agree that leadership is important, but place it on the back burner due to lack of time, their area will continue to struggle. They need not be surprised when the people who report to them (or handle the tasks they provide oversight for) are frustrated, lack motivation, and have low morale. Managers need to expect turnover. People are not machines. Even with the most organized procedures, state of the art systems, and reasonable staffing levels, without leadership, staff will fail to meet desired objectives. Hard working and well-intentioned managers who are not providing leadership will be left wondering and struggling to get the work done.

So how can a manager manage while leading? How do they lead if they are not
“born leaders?” What leadership do they need to provide? How do they accomplish effective leadership when they have little-to-no time to lead?

Leaders are not born

Some are born with personality attributes that align better with the commonly accepted role of leader and, yes, there are people who are so dynamic that they have the potential to become powerful leaders with little effort. While many of us may not be born with these attributes, we all have the potential to become effective leaders. Similar to musicians, some may be born with a gift that increases their potential to be a fabulous musician, but this does not mean that others cannot learn to successfully play an instrument, and play it well. It is extremely important to keep in mind that even those who were born with a musical gift still need to work hard to develop and refine their skills. Focus, time, and attention are required to achieve success as a musician or as a leader – no matter who you are or what strengths you were born with.

Perhaps the most important trait of a leader is the ability to lead themselves – seeking to continually develop and improve. Similar to a musician, it is a matter of refining skills and learning from experience. This is not accomplished easily or through a three-day leadership course. While a course can provide direction, it is the leader’s focus, experience, and direct application of utilizing what is learned that will develop a successful leader. Leadership development is a lifelong, intentional process.

Successful leaders do the following:

1. **Seek to better understand what leadership is.** The first part of developing a plan to become a successful leader is to understand what people need from a leader. Leaders are:
   
a. **Strategic** – Leaders need to be able to identify what is needed from them within the current environment. The approach that worked very effectively last year may be a disaster in the current situation. They also need to realize that their approach often needs to be multi-faceted. If they are leading a larger group, what is effective for some may not be effective for others. For example, a leader needs to realize that when they present an idea or upcoming change to a group, individuals may hear very different messages. The room may include people who are motivated by change, others who are apprehensive, and others who may have personal situations that impact the message they hear. The room may include people who are reading their emails or thinking about their child’s school problems instead of actively listening. The effective leader plans with these thoughts in mind. They know that saying things once, in one particular way, is not effective for delivering the message to several or many.

   b. **Courageous** – Being a leader sometimes means appearing brave even when you don’t feel brave. While a leader may have their own concerns and fears, others need to know their leader can and will address challenges that may appear. They need to effectively communicate this confidence to the individuals they are leading so that these individuals can feel safe and move
forward. If people sense that their leader is nervous and afraid, their angst will only grow. It can be appropriate for the leader to let people know that they have concerns and that not everything may go perfectly, but at the same time instill confidence they will address issues as they occur.

c. **Honest and transparent** – Leaders need to have integrity and need to be transparent. However, this does not mean that they should or can communicate everything they know at all times. They need to be strategic in their communications. There are times that they are provided information they cannot share. For example, there may be times when issues involve certain personnel whose information must remain confidential. There are other times when a large-scale process or change is being developed where it would cause a roller coaster of unnecessary emotions to communicate every change that is being considered during the development phase. For example, in the process of developing a new organizational structure, there will be many ideas discussed. At one day/point in the discussions, it could appear that the final decision is leaning one way while the next meeting may sway a completely different direction. Sharing details of each discussion can bring near panic to those who could potentially be impacted by the ultimate decision(s). Alternatively, a more appropriate approach would be to let people know that a change is being evaluated, why it is being considered, what some end points could look like, and when they can expect to hear more. A leader needs to be honest and transparent, but they also need to manage how and when they communicate so that the staff can feel secure.

d. **Vision builders** – Leaders need to be able to build a vision. When the word vision is used, some may think of what their University’s President is responsible for – building a vision for the institution. The fact is that a vision is needed even for a process change. People need to understand what is changing, why it is changing, and what the change is expected to accomplish. They need to understand the Why. By building a vision rather than simply providing a new procedure to follow, managers are leading. Through this, they are going to significantly improve their ability to achieve success, and to build a staff who are committed to the organization’s goals and who feel they are valued.

2. **Plan for (and own) their leadership development.** Planned leadership development is accomplished through self-introspection and observations, as well as feedback from external resources. The manager must take some time to observe their own behaviors and to evaluate where their strengths are in order to build upon and identify where there may be opportunities for refinement. From there, they can prioritize their focus for the upcoming period. When developing a plan (often updated annually with monthly or quarterly reviews), the plan needs to be realistic. A manager-leader shouldn’t expect to go from novice to inspirational leader within one year AND shouldn’t plan to address all gaps within one year.

a. Self-observations can come from memory but, ideally, maintaining a journal, puts one in a much stronger position to develop a strong plan. Maintaining
a journal does not mean that one needs to walk around with a leather book documenting their experiences with everyone they come in contact with. Rather, it can be as simple as having a word document that is opened after both successful and less successful leadership moments to document what went right and what one would have changed. Taking a few moments to evaluate how the leadership moment could have went better and documenting the high level details provides material for later reference. Upon review of the journal entries, one will likely see patterns and the areas that require focus.

b. For external feedback, information may be gathered through the use of personality assessments (such as DISC or similar) or a 360-review tool. Feedback from one’s supervisor can also be extremely valuable and should be included, if possible.

c. The plan should include only two, maybe three, areas of focus over the course of a year. It should include how the manager will develop these skills. Courses or books on leadership, communication, or related areas can be a very measureable and realistic part of these development plans, but they will do almost nothing by themselves. It is essential that the manager think about how they will apply these skills through experience and how they will hold themselves accountable. For example, one could include the plan to begin monthly meetings with their staff and add an additional hour of preparation before that meeting to evaluate where their staff are at that time and determine what their staff need to hear about at that point. Ideally, they should also commit to journal a few notes after each meeting about what they did and how it went. They should document what their preparation was and how that impacted the outcome of their meeting. Managers who do this almost always find that the days where they did not spend some time on advance preparation went far less successfully.

3. **Leaders continually develop.** Effective leaders understand the importance of their continued development (as a leader and otherwise). Our world continues to change for us, for our organizations, and for those we lead. As a result, it is important that leaders stay sharp and continue to develop and refine how they approach situations. What worked well last year may not work well this year with a different situation and/or group. Effective leaders understand that they are never fully developed, but rather, it is a continual growth process throughout their career.

**The leadership that managers need to provide**

As a leader, we need to (1) identify the path, (2) clear the path (as much as possible), and (3) determine how to move people towards and down that path. Leaders need to be creative and strategic as defined above.

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1 https://www.discprofile.com/what-is-disc/overview/
2 https://www.thebalance.com/what-is-a-360-review-1917541
1. **Identify the path.** Sometimes managers are handed the path by the organizational leaders to whom they report. More commonly, the destination is provided. The manager needs to strategically determine what the path to that destination needs to be. This will include defining many of the What’s, When’s, Where’s, and How’s of the path.

2. **Clear the path.** Next is determining how to simplify the journey down the path. This includes identifying what tools (procedures, systems, etc.) are needed, identifying what adjustments need to be made to certain work areas, and identifying and planning for potential challenges that may arise.

3. **Determine how to move down the path.** It is critical that the leader evaluate the emotional journey that the individuals involved may follow. There may be multiple individuals, so multiple emotional journeys. It would be unrealistic to believe that a leader can effectively address every concern that is put in front of them. However, this evaluation allows the leader to determine how to best prepare staff to move down the path.

**Leading with no time to lead**

The items discussed above may come as no surprise to many managers-leaders and many may have these items on their to-do lists. However, the time to do or address their lists never comes available. With a lack of leadership, staff meander through their daily tasks, turnover occurs as staff become frustrated, and the cycle of “too much work, not enough staff” is only exacerbated. The time dedicated to leadership does not need to be significant, but it does need to be methodically planned. If managers don’t make leadership a priority, they and their staff will flounder and struggle.

While, unfortunately, many research administration managers feel that they can’t afford the luxury of dedicating time to leadership, the fact is that they cannot afford to overlook their leadership role. Leadership is a key requirement of management. These roles are not distinct from each other, but, rather, are interwoven. Learning how to weave the two together is essential to successfully managing a task or staff.

In the end, managers need to be leaders. Leaders are not simply born, but are developed over their lifetimes—and they need to own that development. They need to be strategic, courageous, honest, and transparent. They need to build a vision, whether it is for a new task or a new organizational structure. Those who understand Why will follow.

**About the Author**

Kerry Peluso is a CPA and MBA with over 25 years of experience in pre and post award research and grants administration. She is an Associate Vice President for Research Administration at Emory University. Kerry has previously held positions at both the University of Pennsylvania and Rutgers University. Kerry has held a variety of positions with NCURA. She currently is a NCURA Peer Reviewer, is Co-Chair for the National Leadership and Development Committee and is a frequent presenter at NCURA Conferences. Kerry also serves on the Council of Governmental Relations (COGR) Board of Directors. She can be reached at kerry.peluso@emory.edu
Introduction

Conscious Leadership is the practice of self-awareness and choice in our business relationships. It all begins with a knowledge and choice in how we manage ourselves, and then an awareness of how we impact others. We can’t change anyone. That said, when we change, everything changes. As Conscious Leaders, we will accept the present moment as it is without wasting energy struggling against it, and set an intention for what we want to create. We can let go of whatever does not serve us, and put our attention on what we want to grow. Where our attention goes, our energy flows. Wherever we put our energy expands and where we set our intention, transforms. Because a problem cannot be solved at the level of consciousness that created it, below are tips and practices to support us on our Conscious Leadership Journey. We will begin with an understanding of the self and then move into our business relationships.

Consciousness = Awareness

So much of our day, we respond to the people, situations and experiences we are having on autopilot. The practice of Conscious Leadership allows us to see and be in the present moment, which allows us to meaningfully connect with those around us, assess a situation without judgment, accept the present and set an intention for the future. It allows us to stay grounded and lifted in our own self, even though things may be swirling around us.

Following are some strategies for success to consider:

◆ Be gentle with ourselves

When considering our leadership practices, it is easy to judge ourselves and focus on what we are not doing. There is always a lot to learn, so it’s important to keep an open, relaxed mind without judging ourselves.

◆ Notice...everything is good data!

Some areas of leadership make us feel uncomfortable. These are the areas to pay special attention to for they are likely the areas that could be the most transformative for us. When you feel that discomfort, it is something to take notice of.

◆ What CAN we do?

When pursuing leadership strategies, we sometimes believe those strategies could never work where we are. It is easy to come up with a list of what we can’t do and why. Instead let’s focus on what we CAN do.

◆ Up Until Now…

Outside of “I love you,” these are my three favorite words. They create a space between the past and the future without putting a label on people or situations that can impede the potential of what could be. For example, instead of thinking or saying, “Your monthly analysis report is always late,” we could think and say,
“Up until now, your monthly analysis report has been late.” It creates a space for possibility and a chance to change. If people believe we have given up on them, they can give up on themselves. We can never underestimate a person or groups’ ability to grow and change if we create the space and optimism for them to do so.

◆ Replacing “Should” with “Could”

Replacing “should” with “could” is a game changer when you are talking to yourself and others. Should has all kinds of judgments wrapped up in it. You should do this..you should do that. Replacing “should” with “could” opens up space and possibility without judgment. For example, “You could do that,” rather than “You should do that.”

◆ Replacing “But” with “And”

Replacing “but” with “and” changes the whole tone of what we are saying. When we say “but” we are negating everything that comes before it. For example: “Jill is really strong in her reporting skills, but she needs to bring attention to her office communication.” In order to acknowledge Jill’s reporting skills while guiding her success, we can say, “Jill is really strong in her reporting skills, and she needs to bring attention to her office communication.” By taking “but” out of our vocabulary and replacing it with “and,” we change the tone of our conversation.

You may be thinking this is already a lot and we are still in the introduction! You also may be thinking if you just left the job you are in, it would all be better. If we leave that person or situation behind and move on to another organization, our challenges will be waiting for us again in a new body at our new institution! Therefore, cultivating our awareness is critical.

Let’s try it on!

With Conscious Leadership practices, let’s think of our self in a dressing room, trying on the concepts and practices introduced here. We can try them on, we can take them home and to the office, we can return them or we can keep them in our closet until we are ready to don them. We can fully consider the concepts and practices without pressure, as we consider which will work for us. Remember where you feel the most reticence or discomfort is an interesting area to notice and be curious about.
“We Don’t Attract What We Want, We Attract What We Are”
Dr. Wayne Dyer

Our conscious leadership journey will cover 4 main areas, with practices for your consideration.
◆ The Self
◆ One-on-One Communication
◆ Listening
◆ Relational Agility

The Self
Let’s Begin!
As with any change we are hoping to create, we start with ourselves:
◆ Accessing our natural state of balance
◆ Asking the question “Who am I?”
◆ Meditation

Accessing Our Natural State of Balance
Our natural state is balance. Many times we are trying to find our balance or maintain our balance, as if it were something external to attain. We access our natural state of balance through the breath, which is the connector of the mind to the body. Conscious breathing is the first and fundamental practice in Conscious Leadership. We are breathing on autopilot all day long, and often we are breathing shallowly in our chest. Deep breathing with awareness brings us into the present moment and calms the central nervous system. We can access and return to our natural state of balance through conscious breathing at any time of the day. It brings into our awareness an automatic pause button that we can enact when we need it. This pause button can mean the difference between reacting and choosing our response. Simply closing our eyes, breathing deeply and slowly, for even a minute, can bring healing benefits. Conscious breathing can soften our resistance and strengthen our resolve.

For further exploration, following are three deep breathing techniques from the Chopra Center in Carlsbad, CA.

**Complete Belly Breath:** With one hand on your belly, relax your abdominal muscles, and slowly inhale through the nose, bringing air into the bottom of your lungs. You should feel your abdomen rise. This expands the lower parts of the lungs. Continue to inhale as your rib cage expands outward, and finally, the collarbones rise. At the peak of the inhalation, pause for a moment, then exhale gently from the top of your lungs to the bottom. At the end of exhalation, contract your abdominal muscles slightly to push residual air out of the bottom of your lungs.

**Alternate Nostril Breathing:** When you are feeling anxious or ungrounded, practice Alternate Nostril Breathing, known as *Nadi Shodhana* in the yogic tradition.
This will immediately help you feel calmer.

◆ Hold your right thumb over your right nostril and inhale deeply through your left nostril.

◆ At the peak of your inhalation, close off your left nostril with your fourth finger, lift your right thumb, and then exhale smoothly through your right nostril.

◆ After a full exhalation, inhale through the right nostril, closing it off with your right thumb at the peak of your inhalation, lift your fourth finger and exhale smoothly through your left nostril.

◆ Continue with this practice for 3 to 5 minutes, alternating your breathing through each nostril. Your breathing should be effortless, with your mind gently observing the inflow and outflow of breath.

Ocean’s Breath: When you feel angry, irritated, or frustrated, try a cooling breathing technique such as Ocean’s Breath, or Ujjayi (pronounced oo-jai). This will immediately soothe and settle your mind.

◆ Take an inhalation that is slightly deeper than normal. With your mouth closed, exhale through your nose while constricting your throat muscles. If you are doing this correctly, you should sound like waves on the ocean or if you are a Star Wars fan, like Darth Vader.

◆ Another way to get the hang of this practice is to try exhaling the sound “haaaaah” with your mouth open. Now make a similar sound with your mouth closed, feeling the outflow of air through your nasal passages.

◆ Once you have mastered this on the outflow, use the same method for the inflow breath, gently constricting your throat as you inhale.

Asking the Question, “Who Am I?”

(here is a hint...you are not a research administrator!)

A few years ago if you asked me who I was I would have said I am John Robert’s mother, John’s wife, my parents daughter, my sibling’s sister, friend, and a staff member at NCURA. Now I realize that is not who I am, rather these are some of the precious and sacred roles that I play in my life. These are roles I want to bring my best to and play exquisitely. In Conscious Leadership we consider and keep in our awareness of who we actually are outside of our titles. We are not the roles or relationships we have. The ego can stay wrapped up in our position and titles. When those things aren’t going so well, then we are not doing so well and our spirit suffers. Who we are does not change with people and situations. When we realize our careers are what we do, and not who we are, we can be less rigidly tied to outcome and open to possibilities. We have a more spontaneous balance of ease and effort. We are then best prepared to support and take care of all the people and roles in our life, as we are grounded in our own being. For example, when I began asking this question of who am I, the things that came up for me were: I am strength, I am perseverance, I am kindness, I am compassion, I am optimism. When you consider yourself at your core, what things resonate most with you? As I continued this daily
conversation, I came to the simplicity of “I am.”

Meditation
Before we can take care of others as a leader, we need to take care of ourselves. In addition, when we take care of ourselves, we model the way and give permission for our staff to take care of themselves. Getting 7-8 hours of restful sleep, staying hydrated, eating foods that nourish our body, moving each day and spending some time each day breathing deeply in silence are self-care practices to support our conscious leadership journey.

Meditation is a healing practice that allows us to experience inner calm and deep relaxation. Meditation helps us move beyond the “busyness” of our minds into our inner stillness and peace. We are not our thoughts and silence is the supreme detoxifier. Meditation is an entryway into health and wellness.

The benefits of meditation are tremendous! To name a few:
◆ Strengthens the immune system
◆ Lowers high blood pressure
◆ Decreases tension-related pain, such as, tension headaches, ulcers, insomnia, muscle and joint problems
◆ Increases serotonin production
◆ Brings the brain into a state that promotes healing
◆ Decreases anxiety
◆ Improves emotional stability
◆ Increases creativity and happiness
◆ Develops intuition
◆ Improves mood and behavior

Meditation is not about forcing our mind to be quiet, it’s about experiencing the silence that’s already there and bringing it into our daily life. The goal of meditation is not to stop our thoughts. The thoughts will come. Our mind will wander. We want to gently, easily, effortlessly and without judgment, let the thought pass and come back to following our breath. Have no expectations. There is no such thing as a “good” or “bad” mediation. Anything can happen. Be easy with yourself. Meditation isn’t about getting it right or wrong. Just the practice of allowing your thoughts to pass, and gently returning to your breath, creates a muscle memory to help us not attach to thoughts during the day, to allow them to pass and return to our breath. our center.

I liken learning to meditate to The Karate Kid. Young Daniel wanted to learn Karate. Mr. Miyagi promises to teach Daniel Karate. Daniel comes to his house and spends a day waxing the cars...wax on, wax off in the same circular motion over and over. The next day he painted fences with his wrist flexing up and then down with each stroke. On the third day he sanded the deck, with another circular motion.
Daniel was frustrated, he wanted to learn Karate! Then Mr. Miyaga began to advance on Daniel and Daniel instinctively responded with his defenses side to side, up and down, and left to right. He now had a muscle memory that was instinctively there for him when he needed it. It is the same for breathing and meditation. By entering into the silence each day in deep breathing and meditation, we strengthen this muscle memory. During the day, when distracting or distressing thoughts come into our awareness we can let them pass and return to our breath. We are not our thoughts. Spending time in breathing and meditation creates space between our thoughts so our mind, body and spirit are in union. We can be in peace, regardless of what is happening around us.

There are four soul questions we ask ourselves each time before we go into meditation. We ask these questions and we listen for our responses without judgment. There is no right or wrong way to answer them. We do not want to suppress what comes up for us, rather listen to whatever comes. Over time the answers will become more refined, and will help us discover our essential nature.

*Who am I?*

In the question of who am I, we let go of all the roles we play such as our title at work and, even the most precious roles of spouse, child, parent, sibling or friend. We are asking ourselves who we are outside all of the roles we play. Even if you don’t have an answer yet, asking the question opens up the space.

What do I want? (What do I really, really want!)

What am I grateful for?

How can I help? How can I serve?

We then release the questions and answers, and come into the silence. They are now seeds planted in our consciousness that will influence our choices and possibilities.

We then bring our awareness to the breath. We can use a mantra to help us go inward. A simple mantra is “I am.” We can silently repeat our mantra, easily and effortlessly, following our breath. When we are distracted by a thought, a sound in our environment or sensation in our body, we gently and effortlessly come back to our mantra. A meditation practice in the morning and in the evening after your busiest part of the day, can help you tap into your inner stillness and calm that will support you when turbulent thoughts and emotions are present during the day. As little as 5 minutes, and up to 30 minutes in the morning and the evening, will help you cultivate this stillness.

*Communication Practices for One-on-One*

Now that we have spent time accessing our own spirit and inner stillness, and have heightened our self-awareness, we are ready to bring our awareness to our business relationships. We’ll look at 4 practices for one-on-one communications:

◆ Self awareness of our impact on others
◆ Every compliant is an unasked request and P-R-S
◆ Intention setting
◆ Listening

Self-Awareness and Our Impact on Others

An exercise created and shared with permission by Gale Wood, Comet Consulting from NCURA’s Leadership Development Institute is the perfect place to take a pulse on where we are today. I take this self-assessment a few times a month and can then see trends and patterns and be intentional on things I want to work on in my business relationships. It can also be a powerful tool to use for staff teams to take a pulse on where they are. These are not intended to be shared with anyone. They are intended to increase people’s own self-awareness on an ongoing basis of how we impact others. There is a notes section for thoughts and examples that are coming up for you as you complete the self-assessment.

1: never 2: seldom 3: sometimes 4: usually 5: always

I maintain confidences and don’t spread gossip. 1 2 3 4 5
I respect the opinions and feelings of others. 1 2 3 4 5
I respect the ability of others to do the job assigned to them. 1 2 3 4 5
I provide others with appropriate credit and recognition for their accomplishments. 1 2 3 4 5
I do not speak in negative terms about people who are not present. 1 2 3 4 5
I delegate important tasks to others, trusting they will do the job if they have the information, tools and autonomy to do so. 1 2 3 4 5
I empower others to make the decisions they need for their job. 1 2 3 4 5
I don’t “micromanage” the activities of those in my team. Instead, I establish clear expectations and seek to ensure mutual understanding of what needs to be done by when. 1 2 3 4 5

Notes:

Every Complaint Is an Unasked Request and P-R-S

In addition to taking into account our own responsibility in our business relationships, it is important to recognize that everyone is doing the best they can from their level of consciousness or awareness. We want to meet people where they know that flexibility is the key to our business relationships and leadership practices. Staying fluid and responsive, rather than constricted and reactive creates the perfect balance between effort and ease. Now that we are coming from a place of awareness of how we impact others and where our own growth areas are, here are two tools
to use to enhance your own communication and model for staff who have, up until
now, had difficulty expressing themselves.

Susan Dunlap (Susan Dunlap and Associates and a faculty member from NCU-
RA’s Executive Leadership Program) shared that every complaint is an unasked
request. What a revolutionary concept! When we hear a complaint, we can ask
what is the request that needs to be made. It helps frame thoughts towards a solu-
tion. When there is a complaint, taking the opportunity to encourage staff to iden-
tify their request, is a step forward. They may need time to think about it and come
back, and that is great, too. We can also consider, who is the person we are com-
plaining most about, and what is the request we need to make of them?

Another helpful tip comes from Kimberly Pace, who is a professor at Vanderbilt
University’s Owen School of Management, CEO of Executive Aura, and also faculty
in NCURA’s Executive Leadership Program. If that person is coming into our office
who, up until now, has taken a great deal of time to express themselves here is an
effective framework to consider.

P – R – S

Invite the person to try something you just read about in the NCURA Sponsored
Research Guide, giving one sentence each for:
◆ What is the problem?
◆ Why is it relevant?
◆ What is your proposed solution?

This is another opportunity where people may need to think about it and come
back. I would recommend doing it yourself with the person, that up until now, has
been taking excessive time to express themselves, and then you can invite them to
begin their discussion in this manner. We need to model the behavior first that we
want to see in others.

Setting an Intention
We all know the meetings that, up until now, have not been as productive or effec-
tive as they could be. By setting an intention before the meeting, it can transform the
meeting. If not everyone was able to contribute in the past meetings, you can state
your intention of ensuring everyone has an opportunity to share their thoughts.
Then when you ask those that have already contributed to hold until we have heard
from everyone, it is not personal. People may naturally seek out those that haven’t
spoken yet. Intention setting is transformative as it can impact naturally the choices
we make as a group. We also need to release our attachment to outcome and em-
brace the uncertainty, which is an essential ingredient of our experience. If we are
too rigidly attached to the outcome we want, we are missing the possibilities that
we haven’t even imagined.

“What You React to in Another You Strengthen in Yourself”
Eckhart Tolle
Listening
The most important part of listening is to realize whatever we are really thinking is coming through, no matter what we are saying or not saying. People can sense what we are thinking so it is important to listen with an open mind, without judgments, and without interrupting. People will either be giving up or pushing harder when they sense our impatience to speak. Three practices for effective listening to consider are:

- Listening with honor
- Literal listening
- Relational agility

Listening with Honor
Listening with honor is listening without planning what we are going to say next, not interrupting, not finishing other people’s sentences or asking questions. Listening with honor is receiving all that they are saying without speaking while giving them our full attention. When they stop speaking then there is space to respond and ask questions after we have fully received what they needed to share. This is a powerful practice to set an intention to listen fully, with honor and see how much information you receive. We can often times try to be impressive and interesting in a conversation rather than be being impressed and interested in what others are saying. If we want to relate well to others we need to give our focus to the speaker, and less on ourselves allowing silence to do the heavy lifting in a conversation. We don’t need to fill every moment.

Literal Listening
Literal listening is the practice of believing what people say to us. We can get into a habit of not saying what we mean and expecting people to know what we mean, and conversely, not taking people at their word and building in all sorts of subtext. Literal listening creates more peace in the mind and harmony with others. We can stop looking for the subtext assuming everything is about us! This also teaches others how to communicate with us. If someone says they are fine, then we will take them at their word and move forward without continuously asking them, “Are you sure you’re fine?” People will know if they are fine. If they are not, then they actually need to say so. This saves a great deal of emotional energy for all.

Relational Agility
Relational agility is when it is easy! It is easy to share a mistake, easy to ask a question, easy to talk through a complicated issue. When there is little or no relational agility, it is hard! It is painful to share a mistake, painful to ask for an accommodation, painful to ask a question or work through a complicated issue. When a business relationship is low in relational agility, we can trip and fall into the same unproductive communication patterns time after time. They become a caricature of a person to us and that caricature is all we see. We no longer see them as a whole person, and our perspective narrows to just the problem we are having with them and that is who we begin to interact with. We can fall into stale rituals finding our-
selves saying the same the same thing each day.

To build and strengthen relational agility, it is important to remember this is a person. This is a person with a family, with friends, a person who has insecurities and fears just like you and just like me. Below is a Metta Meditation you can practice to strengthen the relational agility you experience with a colleague that, up until now, has been difficult. The other person doesn’t even need to know. I can assure you, they will feel a difference.

Metta Meditation
Loving Kindness Meditation

*Put yourself in your heart space and say:*
May I be safe
May I be healthy
May I be happy
May I be free from suffering

*Put someone in your heart space who you love...Your beloved, your spouse, your child, your parent, a soul mate, a friend and say:*
May you be safe
May you be healthy
May you be happy
May you be free from suffering

*Put someone in your heart space, who is a great colleague that you work amazingly with and say:*
May you be safe
May you be healthy
May you be happy
May you be free from suffering

*Put the person in your heart space, who, up until now, it has been hard... hard to work with, hard to collaborate with, hard to supervise or report to and say:*
May you be safe
May you be healthy
May you be happy
May you be free from suffering
You have fears...just like me
You have insecurities...just like me
You have known pain...just like me
You have hopes...just like me
May you be safe
May you be happy
May you healthy
May you be free from suffering

Namaste (the light in me, sees and honors the light in you)

The Metta Meditation helps us see the individual as a person first. When people feel a genuine good energy from someone, the issues to work out become separate from whom we are, and we are all better able to address them. We find it easier to go along with their wishes when it feels right and to come back in conciliatory mood if things get to be too much and we need to walk away. We can be hard on the problem and good to the person.

Conclusion

We have connected on practices for self-awareness and awareness of our impact on others. As you are now leaving the dressing room, you can choose what you would like to take with you, knowing these conscious leadership practices are here for you in your dressing room whenever you would like to try one on. Take it one thing at a time. The intention is not to feel overwhelmed by trying to implement everything at once. Be easy with yourself. Be easy with others. Our next day at work, we can simply start with a smile when we see people in the morning, when someone comes into our office, when we walk into someone else’s office and when we leave for the evening. Never withhold the human connection. We need to give that “good night” especially when the day has been difficult. Conscious leaders are generous, magnanimous and forgetful. They never hold a grudge and never underestimate a person’s ability to grow and change, including ourselves.

Namaste

Resources


About the Author

Tara Bishop serves as Deputy Chief Executive at the National Council of University Research Administrators. She teaches workshops on Conscious Leadership, the Seven Spiritual Laws of Yoga and Primordial Sound Mediation. Tara’s workshops are available at no cost to organizations.

Tara earned a Certificate in Business Administration from Georgetown University, School of Continuing Studies, and serves on the Leadership Team for NCURA’s Executive Leadership Program. The opportunity to blend what she loves to do, with her gifts, in service to others, is her ultimate goal. She can be reached at bishop@ncura.edu


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4120.40 Perspectives on Leadership Opportunities from a University Research Administrator and Faculty Member
James T. Oris, Ph.D., Miami University

When I first started my career in academia, the furthest thing from my mind was becoming a university administrator. All I thought about was my teaching and research programs. The university did not provide opportunities for faculty to learn leadership or administrative skills, and I was never offered the opportunity to explore those options outside of the university. Thus, my approach to leadership and university research administration are the result of integrating my life experiences, modeling best practices based on observations of what I considered effective leaders, and (frankly) trial and error.

I grew up in a household that valued education and how it can empower choice and freedom. My upbringing enforced independence, hard work, and striving to do the very best job one can do on every task one was assigned. My parents believed in providing their children with Opportunity, with a capital “O” – the opportunity to succeed and the opportunity to fail – without judgment. I was drawn to my research discipline (aquatic toxicology) from a very early age after reading newly posted signs at Lake Erie declaring that fish were no longer safe to eat, literally a day after my extended family had a fishing trip and a huge fish fry dinner. I was drawn to teaching through my love of water, liquid and solid, by gaining certification for and teaching swimming lessons and SCUBA diving and by offering snow skiing lessons for over 10 years.

In college, I had a professor and advisor who dedicated his life to aquatic research and to the professional development of young scientists and ecologists. At that time, undergraduate research was not as popular or in vogue as it is today, but I sought out the opportunity to do research on the effects of fuel oil on fish eggs. My advisor provided me the Opportunity to do that for two academic years. He helped me identify and gain admission to a top-notch graduate program and major professor.

In graduate school, the focus was on research, and only research. My advisor’s motto was “if you don’t publish your work, it didn’t happen”. He led by example and to this day remains one of the most well-known and prolific researchers in his field. He set high expectations and provided his students with measured mentoring and the Opportunity to define their own projects, to be independent researchers but work within collaborative teams, and to seek ways to fund their research. He also enforced the importance of being active in our professional society – participating in meetings and committees as well as being part of the governance of the society. As important as research productivity was in our lab, in my hopes to become a teacher/scholar I requested and was given the Opportunity to teach a lecture section of an aquatic toxicology class as a senior level graduate student.

These experiences prepared me to be a faculty member, but not a leader. Following best practices I observed in undergraduate and graduate school, I sought to develop students into professional colleagues by the time they graduated. It is through this mentorship and working with a large group of diverse students at different
levels of professional development that I began to formulate my own approach to people management and leadership. As a major advisor, my goal was helping students to become practicing professionals in a normative time frame and then helping them find employment where their passions took them. My former students and postdoctoral fellows now work in all sectors of the environmental profession, as professors, government researchers and policy managers, industrial scientists, private consultants, and non-governmental organization scientists and managers. Developing students into high-performing scientists and managers, and seeing them grow in their roles in their jobs and society was the most rewarding part of my job as a faculty member.

Managing, mentoring, and training students led to the appreciation of different personality types and how each person’s engrained personality preferences need to be mentored in different ways, and my approach with them as individuals was tailored to their specific needs. Whether a student needed more or less direction, was more contemplative and introverted or more impulsive and extroverted, or was more self-insecure versus over-confident needed to be determined before I could be a good mentor. This kind of mentoring does not occur by assigning a postdoctoral fellow or senior graduate student to train new graduate students. It took a significant amount of one-on-one time with each student to be a good major professor. Understanding the strengths of different personality preferences can also be directed toward establishing diverse, cross-functional teams. Each student on a team for our group projects was given a role that they could excel in, but each was expected to learn roles of others on the team that took them out of their comfort zone. In my 28 years as a faculty member, this approach was successful with 14 PhD’s, 13 MS’s, and 7 postdoctoral fellows, with nearly $5M in extramural funding, and resulted in over 100 peer-reviewed publications. To this day, all of these individuals remain good friends and colleagues.

In addition to teaching and research, I was very active in university-wide service as a professor, serving among other roles as director of my department’s graduate program for 10 years, as chair of the animal care and use committee for 8 years, and as a member and then chair of University Senate. I also was extremely active in my professional society, involved at all levels including six years on the Board of Directors and three years in the executive board, which included serving as president.

It was in my service to the professional society, however, that I learned the most about motivating peers and professional staff. I was elected president at a particularly challenging time with regard to finances and management. Instead of focusing on the academic side of the society, I was given the Opportunity to pull a $25M/year society out of a serious financial hole and to transition a 3,000+-member society and its staff of 10 from a long-term and deeply entrenched executive director to a new executive director. Needless to say, there was no training in my background as an aquatic toxicologist that prepared me for that, but it was one of the most formative experiences I will ever have.

In 2008, I moved from full-time faculty member to full-time administrator as the associate dean for research. In 2012, I was promoted to be the university’s chief
research officer and dean of the graduate school. I lead a professional staff of over 20 persons, nearly half of which are in the research office. Until 2016, I also maintained my laboratory research program and continued to mentor students. I have one current PhD student conducting field research, who is scheduled to graduate in 2018, and I still work with students and serve as a research consultant on several projects led by colleagues and former students.

After nearly 8 years as a research administrator, I look back and see that my role as a faculty mentor compared to my role as an administrator to have a tremendous amount of overlap. My approach with mentoring and managing my staff are little different than mentoring students and managing my research program. I am not “The Boss”. I treat students, faculty, staff and administrators at all levels with respect and dignity. I am part of the team and we are colleagues. However, I set clear goals and high expectations, and everyone is evaluated on a regular basis to ensure they are performing at a high level.

I manage projects and people with attention to teamwork, detail and collegiality. I am a delegator, and I believe in the power of diverse, interdisciplinary teams and committees. I lead by example and take full responsibility for the results of the activities I direct or delegate. I listen to the opinions of others and seek evaluation and peer-review at all levels. While I often have opinions on the best way to do something, I am always learning and will continue to learn how to better accomplish the goals of a project or task. I am not afraid of peer-review, critique, challenge or change.

Elements of this approach include the following:

**Vision:** A leader must set the vision for the operation. I believe in a team-based, forward thinking strategic planning process that consistently updates the plan as time goes by. This includes defining a mission, goals, action steps, challenges and opportunities.

At Miami, we use elements of the LEAN approach for strategic planning and process management. This includes a full characterization of the current state, evaluating all elements for their value and necessity, defining an optimal, desired future state, conducting a gap analysis between current and future, and defining actions needed to close the gaps.

**Respect:** A leader must earn the respect of his or her team. This begins by respecting and valuing the contribution of each member of the team. People model their behavior and work ethic based on what they see in their peers and their supervisors. Everyone, including the leader, needs to work at 100%. The leader doesn’t need to know the details of every operation in the group, but s/he must understand each process to ensure efficient and effective outcomes. A leader must listen to her or his team, and be ready to make changes in processes or procedures if the person who does the operation all day every day identifies a better method. In my experience, micromanagers are rarely respected by their staff. However, neither are managers who are hands-off, aloof, and uniformed.

**Motivation:** A leader is only as good as her or his team. If the team is not motivated, no one succeeds. In sponsored research offices, there are often very few
pathways to promotion, so it is critical to find ways to allow staff members to grow personally and professionally. At Miami, we created professional pathways for all areas in our pre-award administration group that allows for promotion through the ranks in sponsored programs, proposal development, research communications, technology transfer, and compliance. These pathways allow for expansion of specific areas as needed. In addition, staff is expected to participate in professional development activities and in their respective professional societies. This allows them to grow and become better at their jobs and provides them with professional visibility and networking opportunities. Great staff are hard to find and even harder to keep. A good leader may be disappointed if, but is not afraid of, when staff members leave the team for an enhanced professional opportunity arises. This approach was derived directly from my experience as a faculty member and how I mentored students, where students were expected to develop into colleagues, complete their projects, and then move on to the next stage of their career.

**Team Mentality and Collegiality:** It is easy in an administrative office for each person to go to their corner and get their work done, but it is not an effective way to operate a complex unit. We meet formally and informally on a regular basis, sharing daily experiences and how we solved a particular problem or took a different approach. Meetings intentionally include both operational and strategic topics. I use the same, cross-functional team approach with professional staff as I did with students – taking advantage of different personality preferences to build diverse teams.

We have fun at work. I like to have fun and so does most everyone I know, so why should work not be fun? Social time, casual conversations, finding humor in most situations, and being flexible with people’s personal lives are all important to me as a leader to build and boost spirits. Happy people are better workers, are willing to share their opinions about their jobs to make them better, are more efficient and effective, are better customer servants, and leave for different job opportunities less often than those who are not.

As with many professionals, life experiences formulate one’s approach to leading and managing others. In my case, experience has led me to a melding of mentorship styles for both students and staff. Providing Opportunities, and making sure others can be successful leads to personal satisfaction and success. I wouldn’t change a thing.

**About the Author**

Dr. James T. Oris holds a Ph.D. in Environmental Toxicology and Fisheries & Wildlife and is currently a University Distinguished Professor in the Miami University Department of Biology where he has been on faculty since 2008. Currently he is the Associate Provost for Research & Dean of the Graduate School. With over 120 peer-reviewed publications and over $4.5M in government and corporate funding, Dr. Oris is well versed in scholarship and research administration. In 2015, he received the Benjamin Harrison Medallion for his service to Miami University and to his profession.
14120.41 **Strengths Based Leadership Development**
Megan Gerhardt, Ph.D., Miami University

Think back to your last performance evaluation meeting, one you either gave to an employee or received. What percentage of that meeting focused on your areas for improvement compared to the elements of your work where you excel? Now go back a few decades further and think about the last report card you remember. Did the subsequent discussion focus more on the A in English or the C- in algebra?

When it comes to traditional approaches to development, in both schools and the workplace, we have been conditioned to focus on our deficits. As a society that seems to value well-roundedness above all else, having areas where we are weak is seen as a threat to our potential for success. Conversely, we tend to minimize or ignore the areas where we excel. If something comes easily to us, we somehow take it for granted and train our focus on areas of struggle.

Much of this conventional development approach can be linked to the desire to be well-rounded. While well-roundedness has a positive connotation in our society, it is an unproven determinant for high levels of effectiveness or success. Given the finite time one can invest in development, striving to be well-rounded achieves mediocrity at best. As Tom Rath put it in his best-selling *Strengths Based Leadership,* “If you focus on being good at everything, you will never be great at anything.”

**Strengths Theory**
The strengths theory of development turns the conventional development approach upside down: Investing in strengths and managing weaknesses creates a stronger return on investment than focusing primarily on shortcomings. Empirical research supports that individuals have more growth potential in areas of natural talent than in areas of weakness. In addition, organizations that focus on development of employee talents rather than weaknesses have significantly higher levels of employee engagement. According to a recent meta-analysis conducted by Gallup, “Almost seven in 10 employees (67%) who strongly agree that their manager focuses on their strengths or positive characteristics are engaged. When employees strongly disagree with this statement, the percentage of workers who are engaged in their work plummets to 2%.”

Yet, ignoring weakness altogether is not a valid success strategy. However, there is a difference between ignoring and managing weaknesses. If you lack public speaking ability, cannot balance your checkbook, or offend people every time you speak, those weaknesses will likely hold you back from being successful and must

2 media.gallup.com/documents/whitepaper--investinginstrengths.pdf
be addressed. If your child is failing algebra, that may jeopardize college acceptance, and s/he should manage this weakness to minimize its impact on the child’s success. However, managing this weakness should not receive greater attention than the attention that is given to your strengths.

According to Rigoni & Asplund, “A focus on employee strengths proceeds from the simple notion that we are all better at some things than others and that we would be happier and more productive if we spent more of our time doing those things.” The strengths-based approach almost seems too idealistic to be valid. Suggesting you spend your time doing more of what you enjoy and are talented at rather than toiling away on work that drains you and underscores areas of weakness seems indulgent. Yet substantial empirical research supports the effectiveness of the strengths approach. According to a study conducted by Gallup, individuals who utilize their natural strengths daily are six times more likely to be engaged on the job. According to a 2015 Gallup meta-analysis: “The relationship between strengths-based employee development and performance at the business/work unit level is substantial and generalizable across organizations. Strengths-based development is related to each of six different performance outcomes. This means that practitioners can apply strengths-based employee development in a variety of situations with confidence that strengths-interventions capture important performance-related information.”

**Pinpointing Talents**

Talents are defined by Gallup as “naturally recurring patterns of thought, feeling, or behavior that can be productively applied” (Hodges & Clifton, 2004, p. 257). Talents are high-potential raw material. However, the only way to truly activate a talent into a strength is through investing time and resources into its practice and development. Gallup defines a strength as a talent that is “consistently and productively applied”.

**Investing in Talents**

Investing in talent is essential to developing strengths. To do so, Gallup suggests focusing on a three-stage cycle: **Name, Claim, and Aim**.

**Naming Your Talents**

While using your talents every day sounds appealing, most of us may not know what our natural abilities are. The discovery of these talents is a critical first step in pursuing a strengths-based approach to development. Gallup’s Clifton StrengthsFinder™ assessment is a research-validated tool to help individuals discover their greatest talents. As of 2017, over 15-million individuals had utilized this tool to

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5 strengths.gallup.com/help/general/125543/difference-talent-strength.aspx
identify their top talent themes. For those without access to such an assessment, there are other ways to begin “strengths spotting.” Clifton and Nelson (1992) identified five characteristics that can help to pinpoint one’s strengths. The authors emphasize that because a strength is an internal ability, it manifests in performance:

1. **Listen for Yearnings**: What is it that you want to do when you have no constraints on your schedule? What do you do in your free time?

2. **Watch for Satisfaction**: One of the easiest strategies is to identify what activities give you energy when you do them. This energy comes from utilizing your natural talents at work.

3. **Watch for Rapid Learning**: Because natural, raw talent is at the heart of strengths, knowing what comes easily to you can be an excellent clue regarding your strengths. While strength building does require investment of time and resources, it always begins with natural talent and ability, or the things you seem to pick up quickly.

4. **Glimpses of Excellence**: If you recall times you have experienced peak performance in your work or personal life, these instances almost always stem from a natural talent that is has manifested as a strength. These glimpses of excellence are also the key to the next phase of talent investment: claiming your talents.

**Claiming your Talents**

Remembering experiences where you felt you performed at your personal best and pinpointing which talents you utilized to achieve such success allows recognition of the innate potential that exists when you operate from your strengths. Once you identify your inherent talents, it is useful to begin watching for opportunities to use them in your everyday life and work.

This can be as straightforward as choosing one of your talents and simply watching for instances where using it helps you succeed. Perhaps you have identified that Input is a top talent theme, but you are unsure how it shows up in your daily life. Gallup defines Input as a theme for someone who is a “utilitarian resource collector,” who collects information and knowledge they believe will be useful personally and to others. While you may recognize the role of Input® in your extensive collection of books, you may be less aware of other ways it affects you. By focusing on your Input® for a few days, you may notice its impact on other aspects of your life. Perhaps you consult a number of trusted colleagues for additional perspectives before making an important decision. This is another less obvious example of gathering valuable information, and your tendency differentiates

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6 [gallupstrengthscenter.com](http://gallupstrengthscenter.com)
8 [www.gallup.com/businessjournal/688/input.aspx](http://www.gallup.com/businessjournal/688/input.aspx)
your decision making approach from others.

Another way to “claim” your talents is to ask how others see you using different approaches. Consulting people who know you from different areas of your life about when they have seen your talents displayed can further reveal how you use your strengths to succeed.

**Aiming Your Talents**

Coaching focuses on identifying goals that are personally or professionally important to a client. Once these goals have been identified, it is essential to pinpoint which talents might best help to accomplish these aims. According to Gallup, all talents can potentially help any role or goal. However, individuals often feel certain talent themes they possess lend themselves better to particular goals. A well-trained coach or insightful manager can also help you recognize which talents might most complement your goal.

Goal setting is one of the most well-supported motivational mechanisms. Simply put, goal setting affects performance by directing and energizing effort, and leading to greater persistence and use of relevant knowledge. Goal setting focuses your efforts in a concentrated direction that you have identified as being important to you. This results in increased effort and persistence, resulting in higher likelihood of goal achievement. Utilizing your natural talents in tandem with goal setting is a powerful combination.

Aiming your talents also involves finding more vehicles where you can use them. This often means pursuing opportunities where you believe your talents can add value. When you become well-practiced in aiming your talents, they can powerfully guide your career choices as you seek out roles and environments where you can utilize your talents more frequently.

Above all else, aiming talents represents an intentional and conscious decision to invest time and resources in areas that have the potential for the most return. However, focusing more time on your talents also means there is simply less time to improve your weaknesses. In his book *Outliers*, Malcolm Gladwell discusses the concept of the 10,000 hour rule: To achieve a world-class skill, you must not only possess a natural talent for it, but you must also spend an average of 10,000 hours over a period of 10 years perfecting your craft. This phenomenon can be seen with top athletes, musicians, artists, and chefs; while they possess inherent raw talent, they also spend significant time practicing and honing that talent over their lifetimes. Such an investment yields a rarely seen level of excellence. This kind of achievement is possible for people who are willing to employ strengths-based approaches.

To invest such time in our talents, we must be able to efficiently and smartly manage our weaknesses so they do not consume the time and energy we need for...
developing our strengths. The management of weakness must be intentional and strategic.

Managing Weaknesses

One frequent misconception about the strengths-based approach to development is that weaknesses should be ignored. Yet, neglecting weaknesses can preclude success. We want to instead manage weaknesses by recognizing them and mitigating the extent to which they can limit our success. The strengths-based approach instead emphasizes investing greater time on strengths than we do on worrying about weakness for the simple reason that our potential for growth is much greater in the areas where we are inherently strong. From a simple return on investment perspective, investing our development resources on talents gives us a higher ROI than investing those resources where we are naturally weak.\(^\text{11}\)

Types of Weakness

How do you manage your weaknesses to ensure they don’t limit your success while not squandering time you could use for strength building? First, it is useful to determine whether you are dealing with a knowledge or skill weakness, as opposed to a talent weakness. Training or education can help overcome knowledge or skill deficits. For a talent weakness, the strategies are more complex.

Strategies for Managing Talent Weakness\(^\text{12}\)

Delegate and/or stop doing the task

There are only 24 hours in a day. Logically, to invest more intentionally in strengths, we must step away from areas of weakness that compete for time with areas of talent. While the ability to delegate to others is often a function of our place in the organizational chart, a useful strategy is to step away from tasks that either drain us or ignore our natural talents.

Use a Strength to Overcome a Weakness

An employee who is feeling overwhelmed by a great volume of tasks may aim to prioritize work and improve time management skills. On the surface, certain talents like discipline or focus seem best suited for this. But what if the employee lacks such skills? Consider the utility of other themes, such as Strategic\(^\text{TM}\), in accomplishing this goal. Those with Strategic talents may be able to identify an approach that eludes others, accomplishing tasks with less time or effort than others. Another talent that could be applied would be Maximizer\(^\text{TM}\), someone who is excellent at determining which tasks are worth pursuing because they are most likely to be important or successful. Another role would be Arranger\(^\text{TM}\), someone skilled at organizing tasks in the most efficient or effective order.

\(^\text{11}\) media.gallup.com/documents/whitepaper--investinginstrengths.pdf
\(^\text{12}\) www.gallup.com/businessjournal/101665/debunking-strengths-myths.aspx
Find a partner/utilize your team

To have adequate time to truly invest in your talent, you must spend fewer resources on your weaknesses, yet you also don’t want specific shortcomings to hinder your success. One powerful strategy to create this balance involves finding complementary partners who contribute talents that others lack. Gallup calls this the “Power of 2”.

Think about who your most valuable partners have been at work and in life. Consider the similarities you share and your differences. What do these people have that you need? Why do you call upon them to help you? What is it that they bring? The answers to these questions can help you identify what your relevant weaknesses may be.

The inverse side of this line of inquiry asks who actively searches you out as a partner and why. The answer to this question can illuminate themes of your potential value within partnerships.

The power of partnership becomes even more complex when extended to a team context. The dynamics of two people integrating similar talents or capitalizing on complementary differences are powerful, yet the potential benefit grows exponentially when these dynamics are expanded to a team of people.

The Well-Rounded Team

Gallup says that a well-rounded individual is at best mediocre in a range of areas, as opposed to being truly extraordinary in a key few. However, the concept of being a well-rounded team can signify excellence represented in the team across different areas of needed talents.

The CliftonStrengths™ approach identifies four key domains of talent: executing, influencing, relationship building, and strategic thinking. Each domain is best understood as the framework through which one tends to lead. One analogy helpful to understanding the concept of domains of talent is the idea of a toolbox: each domain represents a type of tool (hammers, screwdrivers, wrenches, drills) that can be used to get a job done effectively. In this analogy, leading is like building a house: one person would approach that task by grabbing a hammer while another may go straight for the drill, depending on which tool we have the most talent and experience using, and which tends to bring us the most success.

However, while we would advise individuals to focus their time on becoming proficient with the tools they possess, a large-scale project like building a house likely requires excellence across a wide range of tools, and for this we need a well-rounded team. The concept of an effective strengths based team relies on two key understandings: that individual team members identify their singular talents as potential value for their team, and that members understand that team success relies

on an awareness and appreciation for the different “tools” that a team acquires collectively. By recognizing the unique value we each add as individual members with complementary and distinct talents, we can create synergy in teams that far exceeds what one individual alone is capable of producing.

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Dr. Gerhardt specializes in individual and team leadership development, using a strengths-based approach. As a professor of leadership and Co-Director of the Center for Business Leadership at Miami University, she works with students to understand how to best leverage their unique talents to become effective, values-based leaders. Through her consulting group (The Gerhardt Group), Dr. Gerhardt works with organizations across diverse industries to provide a wide range of employee development workshops.
The Sport of Leadership
Katherine Durben, Marquette University

This article highlights select leadership concepts while reflecting upon the theme “The Sport of Research Administration.” Leaders and great players are leaders and great players no matter what “sport” they play.

Teamwork

“People who work together will win, whether it be against complex football defenses, or the problems of modern society.”

— Vince Lombardi

In the sport of research administration, all of the players are part of a team. As Mark Johnson, head coach of the University of Wisconsin-Madison Women’s Hockey Team and member of the “Miracle on Ice” Olympic Hockey Team pointed out – it doesn’t make a difference whether you play two minutes or twenty-two minutes. Each member of the team makes a valuable contribution. Too often we focus on the star players or the starting line-up. Don’t forget that the closers, the subs, and even the bench have a critical role.

Principal Investigators (PI) have an expertise in their science. Research administrators may have a special knowledge of pre-award, post-award, human subjects, animal care, export controls, financial conflict of interest, etc. There is too much complex information that changes too quickly on both sides of the equation for any one person to be an ultimate authority on everything. And while PIs need research administrators and vice versa, research administrators need other research administrators as well for these same reasons. If we want to solve the problems of modern society, we absolutely must work together as a team to do so.

Know the Rules

It’s good sportsmanship to not pick up lost golf balls while they are still rolling.

— Mark Twain

It is important in any sport to understand the rules and play within them (or play around them). Often, there are rules that are not clear or simply don’t make sense. They may have been developed when the world was different and haven’t been updated. They may also have been developed with another agenda in mind and make perfect sense to someone else. In any case, rules and guidance must be followed or there could be significant consequences, including fines and other penalties.

In both research administration and in sports, it is important to get clarification of rules that fall into a grey area. A colleague once said to me, “Why speculate when you can find out?” Keeping this in mind has saved countless hours of wasted time guessing. This statement empowers me and allows me to give myself permission to ask critical questions.
**Develop a Strategy**

If you don’t know where you are going, you might end up somewhere else

— Yogi Berra

Coaches and players prepare their strategies long before they set foot on the field or court. They do their homework and scout other teams. By game time, they are well-prepared. If they have to switch up the game plan and wind up in a different place, it is intentional.

In preparing a proposal, developing a budget or starting a negotiation, you need to arrive at a strategy for getting it done. You need to think about what must be accomplished, if it can be broken out into pieces, who will do those pieces, how it will come together in the end and what you expect the final product to be. This plan must be clearly communicated to all involved. And while it is critical to have a strategy, have a plan B. Things don’t always go right, despite best efforts. There are outside factors that interfere with your best laid intentions. Leaders need to be able to come up with a Plan B or C or even D.

For example, during a recent meeting, one presenter was not able to attend for medical reasons. This was brought to the attention of the program planning committee shortly before the session was due to begin. What happened next was fairly amazing and required multiple people to quickly mobilize to form a new strategy. The topic of the session was a rather niche area. A colleague made a call to a faculty member who just happened to be available and was able to serve as a panelist. The planning committee was able to identify two other meeting attendees with expertise in the area. In the end, the Plan B for the session turned into a robust panel of three experts dialoguing with the attendees and got us where we wanted to go, albeit through a slightly different route.

**Understand Your Role**

That’s the beauty of coaching. You get to touch lives, you get to make a difference. You get to do things for people who will never pay you back and they say you never have had a perfect day until you’ve done something for someone who will never pay you back.

— Morgan Wootten

Sometimes we are active players, sometimes we provide assists, sometimes we are coaches, and sometimes we are referees who need to enforce rules. At all times, you need to contemplate which role is the most appropriate and which role will best benefit the team. Making these decisions is challenging and you need to take a critical look at your own strengths and weaknesses to make a good decision. As a player you have the skill set and have learned and practiced for so many years. You know you can finish a job and get the results you want.

Assisting is the most unselfish role you can play. You are passing the ball to a colleague so that he or she can score. You are letting someone else take the lead in order to make the team stronger.
There are times when you need to coach and let others grow and develop their own skill set and gain their own experience under guidance. It is helpful to give others a safe or perhaps not so safe environment in which to practice. Learning can be tough. When things go well, you accomplish what you want, but you learn a single way, which you likely knew already. Most people don’t fail enough. And perhaps fail is a harsh word. But you learn the most when things don’t always go right. All good coaches see things in their players that the players don’t always see in themselves. The best coaches are not afraid to give their players opportunities that will make them stronger.

As a referee, you need to be neutral and enforce the rules. The courage to enforce the rules is sometimes difficult, but the neutrality can be as well. When my daughter was about 13 years old, she took a class on how to referee soccer games for six, seven and eight-year old players. She loved soccer, loved children, could have a flexible schedule and could make good money. After three games, she said she hated it and never wanted to referee again. Interestingly, it wasn’t because she had a bad experience with parents or coaches or with enforcing the rules. It was because while she loved kids and soccer, as a referee she needed to be completely neutral. She couldn’t have the teachable moments or interact with the kids in the way that she wanted. She would have much rather been a coach in this scenario.

Leaders often need to play all four of these roles. It may not always be comfortable and there are certainly roles that you will prefer. Knowing yourself and your limitations will make it easier to accept the more challenging roles as you need to do so. The motivating factor is keeping what is best for the team as a whole in mind.

Perform Under Pressure

I’ve missed more than 9000 shots in my career. I’ve lost almost 300 games. 26 times, I’ve been trusted to take the game winning shot and missed. I’ve failed over and over and over again in my life. And that is why I succeed.

— Michael Jordan

We all have submitted that last minute grant application with minutes to spare. Or labored over important documentation that would determine some fate. The field of research administration is deadline-driven by its nature. We, just like athletes, compete against the clock all the time. The stakes are every bit as high – an error free application must be submitted and awarded or the professor’s research career could be stalled.

A strange phenomenon that I have noticed is that the closer my office gets to a deadline, the more focused everyone becomes. We have gone through this drill too many times and panic is a waste of energy. There is a point person who leads the effort, but then other team members jump in offering to help in various ways with whatever they can contribute. No task is too small or unimportant. Anyone who can’t contribute simply gets out of the way. There is a certain tension, but it is a quiet, laser precise tension. This tension heightens our skill and helps step up the intensity of the game.
Love the Game

It is not up to me whether I win or lose. Ultimately, this might not be my day. And it is that philosophy towards sports, something that I really truly live by. I am emotional. I want to win. I am hungry. I am a competitor. I have that fire. But deep down, I truly enjoy the art of competing so much more than the result.

— Apolo Ohno

In our own way, we have all shot that three-point buzzer beater from the half court line. And, in all honesty, we work miracles to move research forward on a regular basis. Our recognition won’t be a Super Bowl ring or a Heisman trophy, but we receive our own very satisfying rewards each day.

Passionate leaders, much like passionate athletes, appear to be on a much higher playing field than those who simply go through the motions. There are definitely many individuals who are naturally skilled at one thing or another. But without the passion, what is the point? For example, it is painfully obvious to read through a proposal written by a disinterested PI. There is no enthusiasm and even the best idea seems flat. Reviewers pick up on that in a heartbeat. The bottom line is that you need to love the game – no matter what your game is.

Conclusion

Teamwork, knowing the rules, developing a strategy, understanding your role, performing under pressure and loving the game will culminate in team success and a winning career. Sometimes there are losing seasons or heartbreaking losses but we move on and look toward the next win. The best part about the sport of research administration is that there are far more wins than losses. And to be a winner, there doesn’t always have to be a loser.

About the Author

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Leadership and Good Sportsmanship
Sue Kelch, University of Michigan

It’s always about winning -- and losing -- that’s how you play the game
As the saying goes “it’s not about winning or losing but how you play the game.” This comes from the widely held belief that the completion of the game is in itself an end. But the end of each “game” is hardly the end at all – it’s actually a beginning. Kings and queens inherit the throne and begin their reign. After government elections the winning candidate begins governance. In the workplace, the selection process for that highly selective and rare post has completed and the new hire begins to perform their responsibilities.

In research administration, as in life, accomplishing our goals is never about the destination, it’s about the journey. But even more importantly, it’s what we choose to do upon arrival that truly counts. And it is here that the real challenge occurs. We may not have realized it yet, but with awards, promotions, or elections come high expectations. You have risen to the top of the pool of candidates and are now expected to begin your new role. Or perhaps you lost the challenge and having anticipated or even expected the new opportunity to be yours, you are left at a loss.

Naturally, most of us are thrilled when we are in the winner’s circle. The crowd is cheering, the confetti floats and falls, and we stroll into the arena to embrace our hard-fought prize. Afterwards, we display our framed award in our office, put the trophy in the case, or finally take a seat at the elite management table. Of course, for every winner there are the losers. Accepting the outcome, win or lose, with humility and grace is a reflection of a good leader and a good sport.

But winning awards, promotions, or elections comes with high expectations. Are you prepared to handle the victory? And if you are not in the winner’s circle, how will you handle the defeat? For the professional research administrator, we need to be prepared for both winning AND losing in order to be effective leaders. Because in both the winner’s circle and the loser’s demise, the true challenge is how we handle what comes next.

Leadership training - don’t gloss over the losing
Most research institutions invest in leadership training for its employees, either as an aspect of professional development or as a requirement for management positions. Training topics typically include developing and enhancing leadership skills through team building, work-life balance, and emotional intelligence. Yet, with all of this leadership training, are we truly prepared to handle professional victory or loss?

Whether we won or lost an election or a promotion, we need to be prepared to lead in both outcomes, not only as the winner but as the “also-ran,” “runner-up,” or dare we say “loser?” Managing defeat in a positive and healthy way is critical, because poor sports ultimately make poor leaders and can cause otherwise strong teams to deteriorate.

In the book Bad Leadership, author Barbara Kellerman discusses how leaders cannot lead without enablers. For example, referring to the accounting fraud scandal
at Enron Corporation in 2001 and what led up to it, Kellerman asserts that Enron’s leaders “…were agents of change. These men were not just a few rotten apples. Rather, they created, indeed encouraged, an organizational culture that allowed many apples to spoil and, in turn, ruin others.”

Work for the win
Since winning that highly coveted spot is the ultimate goal, be sure that you are taking all the necessary steps to reach that goal.

When applying for a job position or volunteering effort, ensure that you can fulfill your commitments with both skill and effort. Understand the meaning between desired and required qualifications, and be honest when submitting your applications materials. If you have only five years of experience but eight are desired, don’t fudge the numbers. Instead, explain or expand upon your experience and add other credentials that would serve to enhance your background. Remember, reviewers are also looking at your potential.

Furthermore, if the position requires a certain level of education that you do not currently have, work to achieve that goal so that you are qualified to apply for the post at a later time. If you are dishonest and end up getting the position, you will always be looking over your shoulder and worried when the truth may come out. These cases are not considered mere omissions of error—they often end up in disgrace and abrupt resignation.

Be careful for what you wish
What if you should get that long sought-after position, but later find yourself unable to fulfill your responsibilities? For example, you are in the middle of planning a conference for more than 200 people, but a crisis suddenly occurs in your life. As soon as the problem arises make this clear to everyone involved. Do not try to convince yourself that you can do the impossible or be dishonest to others. Remember, this is about having a successful conference, it’s not about you. The more colleagues you involve and share in your concerns, the faster you will get the help needed for the event to run smoothly. Find a way to ensure that the conference is a success, even if it means gracefully stepping aside.

Or, what if you have finally achieved that top spot and are immediately overwhelmed with your new responsibilities? You now find yourself questioning your wisdom of accepting this role. Melanie Bolke’s article “So You Got the Job. Now What…” outlines eight steps to take from Day One. The first step, “Think of the reputation you want to have as you exit your new role,”- sage advice. What do you want to achieve and what are the resources you need to marshal to support you? If you immediately assess your situation and chart your plan, you will take better control for a positive outcome. Start something the way you mean for it to end.

Win as if you lost
Winners and leaders should not take their hard-won victories for granted. Rather than resting on their laurels, they should strive to not only achieve original goals but
seek out new opportunities and challenges. There is a well-known expression that second place “tries harder.” Never become complacent, but continue to work hard and challenge yourself as if someone were watching, because there is always someone watching.

**The art of losing gracefully**

“When one door shuts another one opens.” What does this mean for you? In some instances, it may mean that this opportunity may come along again. If that is the case, use this time wisely to explore what needs to be in place in order to enhance your qualifications. Do you need further credentials, such as a CRA or a Master’s degree? Perhaps more experience is recommended?

If a search and screen committee tells you that you were not selected for a position, reach out and ask what your weak and strong points were. Most times you will get a response that will help you gain insight and further improve yourself. Keep your eyes on the prize, and try again.

**Lose like you won**

We all know that losing a prized position can really hurt. For most of these cases, there can be weeks or months of background work for the application process alone. As we apply and interview for the post, we practice answering what we would do if we were selected. Naturally by this time we have all put ourselves in this role and dream of what we would do, not even knowing the outcome.

A great example of a lengthy and contested selection process is the 2000 U.S. presidential election. This was one of the most contended and emotional elections in our nation’s history. Although Democratic candidate Al Gore won the popular vote by a narrow margin he lost the electoral vote, therefore the election was won by Republican candidate George W.H. Bush – by a mere electoral vote.

As the timeline of events unfolded, chaos flooded the story lines. Beginning in the early hours of the day after the election, Gore conceded that he lost the election. Upon learning that the ballot tally in the state of Florida was too close to call, he immediately retracted his statement.

Next came the highly debated recount. Eventually the battle went to the U.S. Supreme Court, which decided in favor of Mr. Bush in the Bush V. Gore case. The timeline of events reads like a thriller tale with blow after blow of details and constant turn of events. The fact that the election results went all the way to the Supreme Court proved that this election was truly unprecedented in American history.

Ultimately, Gore conceded that he lost the presidential election. In his concession speech, he recognized that the election process was bigger than he was and that the country needed to move on, stating, “Now the U.S. Supreme Court has spoken. Let there be no doubt, while I strongly disagree with the court’s decision, I accept it… And tonight, for the sake of our unity of the people and the strength of our democracy, I offer my concession. I also accept my responsibility, which I will discharge unconditionally, to honor the new president elect and do everything possible to help him bring Americans together…”
Al Gore painfully but graciously conceded defeat and pledged his full support of the winner. This not only served to validate President-Elect Bush but encouraged the nation to support him as well and move on.

Without skipping a beat, Gore then went on to use his talents and skills to serve as a champion for the environment, and eventually won the Nobel Peace Prize in 2007 for his acclaimed work. Not bad for an also-ran. Be like Al Gore.

Support your opponent

Taking your cue from Al Gore -- when informed of your loss, it is important to take a moment and extend your sincere congratulations to the winner. Take it upon yourself to help them succeed as you would have wanted to succeed. Remember that you are working for the greater good and avoid focusing on your own self. The more you move into the role as the also-ran, the easier it will become.

Throw yourself directly into the pain, pitch in and help, and learn to smile through it. Although at first it may not come easily, studies show that smiling (i.e., putting on a happy face) helps to boost your mood, increase happiness, and lower stress.7 Your body and emotions soon take the cue and start going along with your actions.

That is how you rise above your loss. And there is nothing wrong with grieving and working it out by confiding with a friend or consoling yourself. This is a real loss, as you likely have invested many hours of your time and other’s time in supporting you with letters of nomination or other documentation. Learn to use your grief to support those who won the prize. Even though you weren’t selected, there is consolation in knowing that you were a strong and qualified candidate. Support the winners as they succeed and offer your talent and skills, and you will become a part of their success.

Lose like a winner and win like a pro

Realize that while the game may be over, the process is never complete. Leaders are constantly evaluated and watched, and you are asking those whom you lead to emulate your actions. As others assess our behavior, we should also continue to assess our own behavior and view the impact it has on others. Show others what we would like to see in ourselves.

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**Strengthening our Capacity to Build Long Lasting “Semi-Perfect” Relationships in our Multi-Generational Workplaces**  
Carolin Rekar Munro, Eye of the Tiger Consulting

One of the preeminent challenges that we grapple with in our organizations is bridging the gap between multi-generations. With five generations working alongside each other – Traditionalists, Baby Boomers, Generation X, Generation Y, and Generation Z - we have witnessed not only a unique synergy of gifts and talents, but also a spike in workplace conflicts. These conflicts, stemming from generational differences in attitudes, priorities, expectations, and work styles are pervasive, persistent, and polarizing. They permeate all aspects of organizational life from informal exchanges in the hallway to formal discourse in the boardroom, and they chip away at relationships with others, affecting how we listen to and respond to each other. If left unattended, these conflicts seep into the bloodstream of an organization’s culture and threaten the sacred grounds of productivity, profitability, job satisfaction, and employee turnover. Consequently, the sustainability and prosperity of our organizations are at risk.

To further complicate the situation, we are inundated with literature about generational differences, which may cause inadvertently more harm than good. Even though researchers have good intentions to educate us, they may be perpetuating the generational gap by putting the spotlight squarely on how we differ from each other. As a result, many stereotypes abound in the workplace about the generations. Resultantly, we view the work world dichotomously as us versus them, with its spiralling downward assumptions about one being better than the other.

In the midst of this quandary is a call-for-action to you – practitioners in the workplace who, at any stage in your career, can play an instrumental role in shaping how multi-generations work together. You are invited to not only advocate for multi-generational harmonization in your organizations, but also become a co-creator in cultivating strong workplace relationships. However, as we venture into this new territory, the intent is not to expect, or to push for, quantum change. For most people, change is a delicate and difficult transition. Let’s not expect to wave a wand and transport ourselves magically to the promise land of multi-generational synchronicity. Change of this magnitude is more likely achieved when we incrementally, unhurriedly, and patiently lean into working with others.

Offered in this article are tools you can apply immediately to navigate the richness and complexity of communication in multi-generational workplaces. These tools are the outcome of my ten years studying the chemistry of relationship-building between generations. Specifically, the purpose of this article is two-fold: 1) to examine the top *connection crushers* which constrain our ability to engage *fully* and *thoughtfully* with others; and, 2) to guide you in harnessing your leadership to contribute to a culture of multi-generational inclusivity, engagement, and collaboration in your own organizations.

You might be curious as to why the title of this article refers to *semi*-perfection. In reality, it is a fallacy to think we can achieve *perfection*, especially as it pertains to
human relationships. By seeking semi-perfect connection, we set our sights more realistically on being the best we can be. We’ll aim for the best, realizing we won’t always be in perfect sync with others. Occasionally, we might strike the wrong cord and cause conversations to go awry. That’s perfectly fine. Be willing to learn from this and keep building your capacity for stronger workplace relationships.

Fostering Generational Synchronicity: A Paradigm Shift

At the starting gate of exercising our leadership, we are encouraged to develop and hone one of the most misunderstood and underestimated competencies under the umbrella of communication – the ability to connect with others. As easy as this may seem, it is fraught with layers of complexity. I only fully understood this when I found myself in a culture radically unlike my own – the world of the Maasai tribe on the open plains of the Serengeti.

In 2014, I was blessed to spend most of the year living and working in Tanzania, where I have three roles: co-owner of a safari company which custom designs safaris in the Serengeti; visiting professor at Mount Meru University teaching in the Master of Business Administration program; and, researcher and volunteer with Education Beyond Borders collaborating with an international team on a teacher leadership development project. On a blistering hot October afternoon, sitting with friends in a Maasai boma (hut) in the middle of the Serengeti, an email arrived (yes, there are occasional moments of internet euphoria when one’s modem finally and briefly kicks in). The message was an invitation to be the keynote speaker at an international conference. I turned to my dear Maasai friend, Meleji, to share the news, to which Meleji asked, What will you speak about? I replied the conference organizers want a presentation about connections. Without hesitation, Meleji asked if I will talk about Africa. Sensing my perplexity, Meleji explained that it was Africa that schooled me in how to connect. He proceeded with great candidness and care to tell me that, when I was a newcomer in Tanzania seven years ago, my skills were rusty in this area.

In hindsight, I agree with Meleji that I was clumsy and inept at connectivity when I first set foot in Tanzania. I made endlessly embarrassing blunders in a culture that prides itself on establishing connections first and doing business second. Whether I was speaking to tribal elders, youth in the village, or vendors in the marketplace, people dismissed or ignored me. I was trying desperately to offer ideas, opinions, and recommendations, and each offering landed unceremoniously flat with predictable regularity. I couldn’t understand why I was not acknowledged, appreciated, or heard. As distressing and diminishing as these encounters were, they were my humbling and life-changing awakenings. The steep learning curve shapes every aspect of my life whether I am working with corporate clients, taking families on safari, teaching my MBA students in Tanzania who speak English as their third language, or volunteering in remote villages where community members are initially hesitant about the work we are doing.

I share this story with you for two reasons. First, at no point do I want you to think I am walking perfection as a connector. I stumbled, and continue to stumble,
with connections. I continue to learn, and I sincerely hope you will join me in the quest for understanding connectivity. Second, if you accept the invitation to exercise your leadership to cultivate a culture of multi-generational harmony in your own organization, then connectivity is a key skill to add to your repertoire. The ability to connect with others is a signature skill honed by the folks around us who soar to unimaginable heights personally and professionally. When we commit to becoming exemplary connectors, the result is a rare and golden union with others which surpasses learning how to communicate well.

However, do we really understand what connection is and what it entails? The term *connection* is ubiquitous and rather clichéd in our workplace language. We recruit, hire, promote, and even terminate employees based on their prowess as connectors. We write organizational mission, vision and value statements and team charters steeped in mantras about our collective commitment to building connections. Yet, how often do we unpack the meaning of connectivity and the set of behaviors associated with connecting well? We make assumptions about what it is; hence, leaving ourselves open to a slew of problems because we do not have a common language of understanding.

From my conversations with people in each of the generational cohorts, connectivity is differentiated from communication by its magnetic and magical qualities. It focuses on identifying with people authentically, deeply, and meaningfully, and it leaves us feeling nourished and enriched mentally, spiritually, and physically. Cope (2017) uses the term *soul friends* to capture the essence of connectivity: elicits feelings of safety, inspires a deep feeling of belonging, is irreplaceable in our life journey, yet capable of challenging, opposing, and frustrating us. In his book, *Social Intelligence*, Goleman (2007) refers to this interconnectedness as “the glow of simpatico” and draws our attention to the discovery by neuroscience that our brains are hardwired for intimate brain-to-brain hook up with others. Christakis and Fowler (2009) argue provocatively that connection is a contagion in which we are constantly shaped by, and shaping, our network. The reverberations of our connectivity extends into the universe beyond our control, which is reminiscent of Stanley Milgram’s famous experiment which concludes all people are connected by an average of six degrees of separation.

What would happen if each of us mastered the art and science of connectivity? Imagine the benefits to be reaped for our multi-generational community and for each of us, personally and professionally.

### 3 D’s of Connection Crushing

We begin the journey toward becoming better connectors, by first looking at the behaviors which need to be purged from our interpersonal engagement with others. Based on my research on multi-generations in the workplace, there are three *connection crushers*, which all five generations concur are counterproductive to connectivity.

*Devaluing the Awesomeness of Others*

One of the fastest ways to sabotage any possibility of connecting well with others is to make people feel devalued in our presence. Yet, this is seldom on our radar.
screen. For the most part, we go through each day unaware of the relationship footprint we leave behind. Devaluing others, whether intentional or unintentional, often is the damaging outcome of our preoccupation with the incessant and frenzied spin of activity in our lives. We become so fixated on our own agenda and consumed with completing the infinite number of tasks on our to-do-list, that we often brush aside and ignore many people. If folks around us are not integral to our personal or professional mission, they unlikely get much, if any, of our attention. The feverish race through the day has become our norm; and, in many cases, our driving force, especially for those of us who equate the visibility of our busyness with earning coveted rewards, such as promotions in the workplace.

Irreparable damage can be done to relationships when we signal verbally or non-verbally to someone that we perceive them to have diminished value. I understood the full-on offensiveness of this a few years ago when my safari business partner, Allen, and I were interviewing candidates for the position of safari guide in our company. As part of our interview process, Allen suggested each candidate be asked to wait 15 minutes in the lobby with our receptionist prior to the interview. At first, I was puzzled by this, but the motive soon became apparent when we interviewed our first candidate. Into the interview room came a super-star with several years of experience leading safaris and treks up Mount Kilimanjaro, impeccable knowledge of eco-systems, and fluency in four languages. Everything was progressing well until Allen asked the alpha question - What is the name of our receptionist? The room fell silent; the candidate was gobsmackingly aghast and then offended by the question. He responded haughtily, “How am I supposed to know the name of your receptionist?” He didn’t get the job.

Was that question enough to not hire him? Yes. It was the most significant and revealing question we asked. We can train someone to fulfil the technical aspects of a job, but it takes considerably longer to train someone how to value people. Valuing people is first and foremost, regardless of the job title you have, the rank you occupy, or the industry you are in. Nothing trumps valuing the awesome of others. However, the caveat is to refrain from being strategic in your approach to valuing others; that is, playing the role of caring about others by using scripted platitudes and gestures, instead of being genuine and spontaneous. Being genuine is of paramount importance, because people can quickly ascertain whether or not you are sincere. If people perceive you to be disingenuous, then they are less likely to want to be in your presence. They are likely to avoid you at all costs and they are less likely to give you a chance to work your magic to impress them with your knowledge, skills, and forward thinking ideas. Long term, you have lost your ability to connect with them for whatever is on your work agenda in the future. This inability to connect with others is career suicide; there are very few milestones in our careers that we can achieve without the guidance, support, and sage advice of others.

**Dominating Conversations with an Overinflated Ego**

If we are not mindful, we might show up in conversations with a disproportionate sense of our own importance; and, as a result, we might dominate conversations.
This shows up as overzealousness to showcase our expert knowledge and to prove to others – and ourselves – that we are equally, if not more intelligent and worldly than others. Given the depth and breadth of knowledge and experience in our portfolio, we sometimes bring this into conversations as platform presentations, where we expect others to listen and refrain from interrupting or changing the topic. We end up talking at people about what we know and what we have done, instead of talking with people. When we consume the space to communicate what we know, rather than exploring what others know, we are labelled as attention-seeking, egocentric, and selfish. While a dominant person may be popular and successful in the short term, according to Rosenthal and Pittinsky (2006), they are likely to “falter over time due to their impairments in self- and interpersonal functioning” (2006, p. 624).

People who are on the receiving end of domineering conversationalists are exhausted from the exchange. They have run the gamut of emotions from shock to anger as they try to manage conversations with a person who has a bulldozer-approach to engagement. As well, they likely spent the entire conversation jockeying to make a point, ask a question, or refute the legitimacy of a claim. Because it is too taxing to be in the presence of a domineering conversationalist, people will go to great lengths to avoid them. People are not attracted to, warm up to, or rally behind people who are domineering. As a result, any possibility of a long-term connection with this person is destroyed.

Descending into the Darkness of Evaluative Language

Being cognizant of our internal dialogue is one of the primary determinants of whether connections with others will be arms-length transactions or meaningful alliances. Our inner voice, with its intricately woven web of values, beliefs, attitudes, and assumptions, shapes not only our thinking, but also our speech and our behaviors. For the most part, we don’t realize the domino effect our private thoughts have on how we act and react to others, and how others experience us in conversation. Awareness of the power of our internal dialogue helps us explain why some conversations disintegrate in front of us.

When we show up predominantly with an evaluative presence, we can potentially become a conversation crusher. We play the role of a critic who weighs in with judgment and criticism about others and the world around us. Spending most of our time in the evaluative arena and putting a rightness or wrongness spin on what we see or hear, shuts down our ability to learn new things about others and about the world. Once we are in the evaluative zone, it is hard to move out of it. When evaluative people come together the conversation tends to divide and disengage them because, for the most part, they focus on finding fault, refuting the beliefs of others, and seizing centre stage to showcase their expert knowledge instead of leaving space for others to contribute. When evaluative conversations are in full swing, there rarely is a member amongst them who is willing to, or has the interpersonal poise, to shift the conversation into the zone of positivity (Holtgraves, 2013).

Evaluation can play a salient role, but only in moderation. Reserve it for occasions when it makes a constructive and critical contribution to organizational or
personal change; for example, when an expert critique of a workplace policy or practice is required or when assessment of performance is expected. The evaluation that has the potential to be a conversation crusher is that which does not add value. It is simply commentary for the sake of voicing one’s opinion, and it does more harm than good.

3 C’s of Connectivity

Discarding connection crushers from our approach to engaging with others sets the stage for adopting healthy behaviors, which promote connectivity at the deepest and most meaningful levels. Connectivity at its finest is the fusion of curiosity, courageousness, and cultivating leadership to create an unforgettable experience for everyone you have the pleasure of meeting.

Curiosity

Becoming a consummate conversation connector in our multi-generational workplaces starts with developing an inquiry-based approach to engaging with others. At the heart of an inquiry-based approach are curiosity and genuine interest in better understanding others and the world around us. An inquisitive presence means we enter into dialogue with wonder about the world, and strive to comprehend and appreciate others, regardless of how divergent their beliefs and values are from our own. This takes the form of:

◆ asking more questions instead of having all the right answers (filling our vocabulary with questions such as what is, why, and what if);

◆ leaving space in conversations for others to share their stories rather than dominating with our own (when we talk, we reinforce what we know; when we listen, we learn);

◆ actively listening to others by keeping all distractions in abeyance and showing genuine interest in getting to know them;

◆ listening deeply for that which binds us rather than focusing on what divides us;

◆ viewing conflict as a relationship builder (disagreements are part of life and authentic relationships develop when we share candidly our thoughts and feelings); and,

◆ parking our judgment and being unconditional in our regard for others.

I offer a tool to help enhance awareness of our internal dialogue and to guide us in transitioning away from evaluative language. For the rest of the day, let’s take our judgment temperature; that is, every time we catch ourselves being evaluative, let’s follow it up by making three statements or asking three questions that are inquiry-based. For example, when someone cuts us off on the freeway, instead of the usual expletives under our breath, we’ll replace them with inquiry-based statements, such as she may not have seen me, he could be rushing to an emergency, or someone’s had a really bad day and just needs to get home to the comfort of family. At first, this is agonizingly painful and awkward; it sounds like we are speaking a foreign language. Yet,
with patience and practice we can train our mind to shift from being evaluative to inquiry-based. On occasion, we might wander back into evaluative messaging, but I encourage us to continue to bring unconscious thinking into full spectrum awareness. Eventually, inquiry-based messages transfer from our thinking into our speech and then into our actions and reactions to others. The original awkwardness, in time becomes natural.

Imagine the impact of having an inquiry-based presence when we show up for conversations with our multi-generational colleagues. It can leave an indelible mark on how we present ourselves and how we are perceived, and it can infectiously model the way for others.

**Courageousness**

Do you have the courage to show up perfectly imperfect in conversations with others? Do you show your authentic self, with its juxtaposition of confidence and insecurity, expertise and ignorance, and eloquence and incoherence? Some of you might be thinking that showing vulnerabilities is the seat of demise for us as professionals. In actuality, it is the opposite. When we aim for a perfect presentation of ourselves, we are less sought-after as team members and for leadership roles. Specifically, perfectionism is associated with problems involving control, negative rumination, emotional over-expressiveness and assertiveness (Flett et al., 2016).

In reality, people don’t gravitate to our perfection; they gravitate to our brokenness. They are drawn to those of us who have the courage to be fearless about imperfection and show our foibles and warts. It is in this brokenness that people realize they share more in common than they ever thought imaginable. Suddenly, you are just like them.

Since each of us is extraordinarily unique, it would be inappropriate to prescribe a specific pathway for becoming courageously imperfect. I can’t think of anything more unbefitting than giving you a checklist of behaviors that we collectively adapt. Instead, here are a few questions to guide your reflection that, hopefully, inspire you to take your own first step toward being perfectly imperfect:

- How much of yourself do you let others get to know?
- If you aren’t revealing your true self, what are you holding on to and why? What would happen if you simply let this go?
- What is one incremental step you can take today that would reveal more of yourself to others?
- If you follow through with this, what do you envision might change for you and for others?
- How can you sustain your commitment to personal change?

When you commit to even slight changes, notice what happens. Suddenly there is a shift in how others engage with you. This is especially appealing as we exercise our leadership to close the generational divide in our workplaces. Revealing more of our authentic selves enables us to find the universalities that have the power to
unite us. In this union we are positioned to become the engaged, high-performing and productive teams that can slice through relationship-based challenges to reach organizational mandates and goals.

*Cultivating Leadership*

No one is perfect in making connections, and everyone carries a hint of apprehension about whether they will humiliate themselves. Hence, many of us wait for someone else to initiate conversations. Regrettably, if neither party musters the courage to make the first move, both parties run the risk of missing a rare and golden opportunity to connect with someone with whom there might be unimaginable gains. For this reason, *you go first*; that is, you take the lead to introduce yourself and launch into a conversation. It doesn’t need to be a deeply philosophical and big brain starter; lead with any topic which strikes you as an appropriate icebreaker in the moment. Simply share whatever has crossed your mind. In doing so, you model the way for others in how to exercise their leadership in striking up conversations.

However, there will be occasions when you are in the presence of someone with whom you have nothing in common. You volley from topic to topic in search of one nugget of commonality, but nothing is forthcoming. As tempting as it may be to conjure up an excuse for a fast exit, please stay in the conversation and *hold the polarities*. Amidst the mounting differences between you and someone else, you might unexpectedly find one gem that excites both of you. Added to this, you might discover partnerships in the least likely places. I chuckle as I write this statement. Six years ago, if someone would have said I would become co-owner of a safari company taking travelers from around the globe on their dream vacation and driving a Landcruiser across the open plains of the Serengeti to chase cheetah and search for the illusive black rhino, I would have asked them what they were inhaling.

Holding the polarities will be especially advantageous in our workplaces which are characterized by generational differences in attitudes, priorities, expectations, and work styles. Imagine the possibilities for engagement, inclusivity and collaboration, if we can put differences and assumptions about each generational cohort in abeyance and stay in conversations long enough to play in the sandbox of possibilities.

*Conclusion or Beginning?*

There is a teachable moment in every conversation we have with others. In order to grow to be effective in managing connections, take time to reflect on what transpired in your conversations. What do you need to:

◆ *continue doing* because it is constructive and supports a culture of multigenerational collaboration and inclusivity?

◆ *stop doing* because it is counterproductive to engaging well with others?

◆ *start doing* because fostering workplace connections is ongoing work-in-progress?

In the weeks and months ahead, I envision you at work exercising your exemplary leadership and managing the many challenges and opportunities you face leading forward and leading by example. Armed with a few new tools, I hope you
will exercise your leadership in partnering with others to choreograph a culture of multi-generational unity where we connect in extraordinarily semi-perfect ways. With heaps of patience, unfaltering commitment to doing things differently, and a willingness to be immensely courageous and curious, stretch into a new reality of what your organization can look like. It’s just the beginning.

**Bibliography**


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